

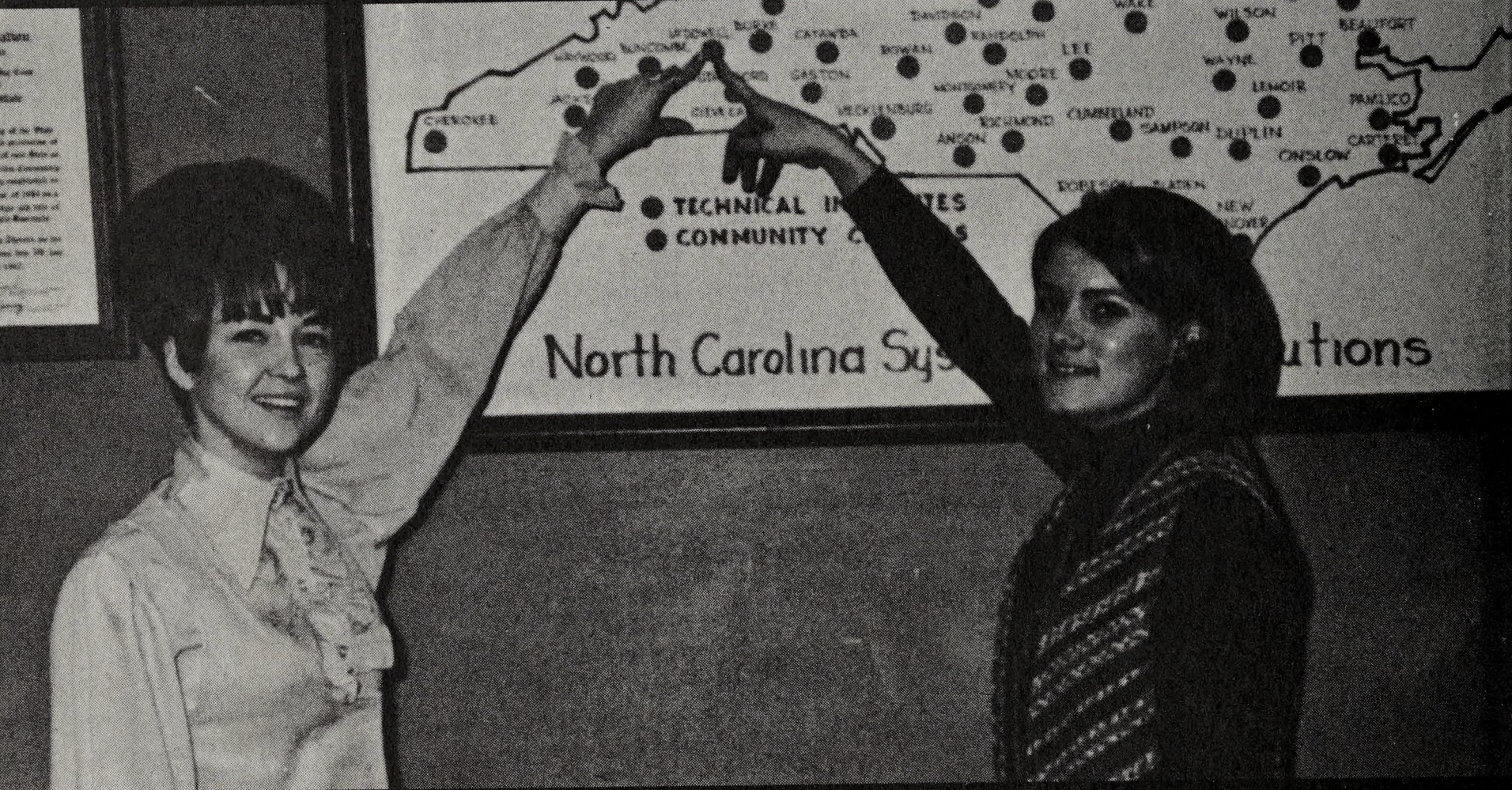
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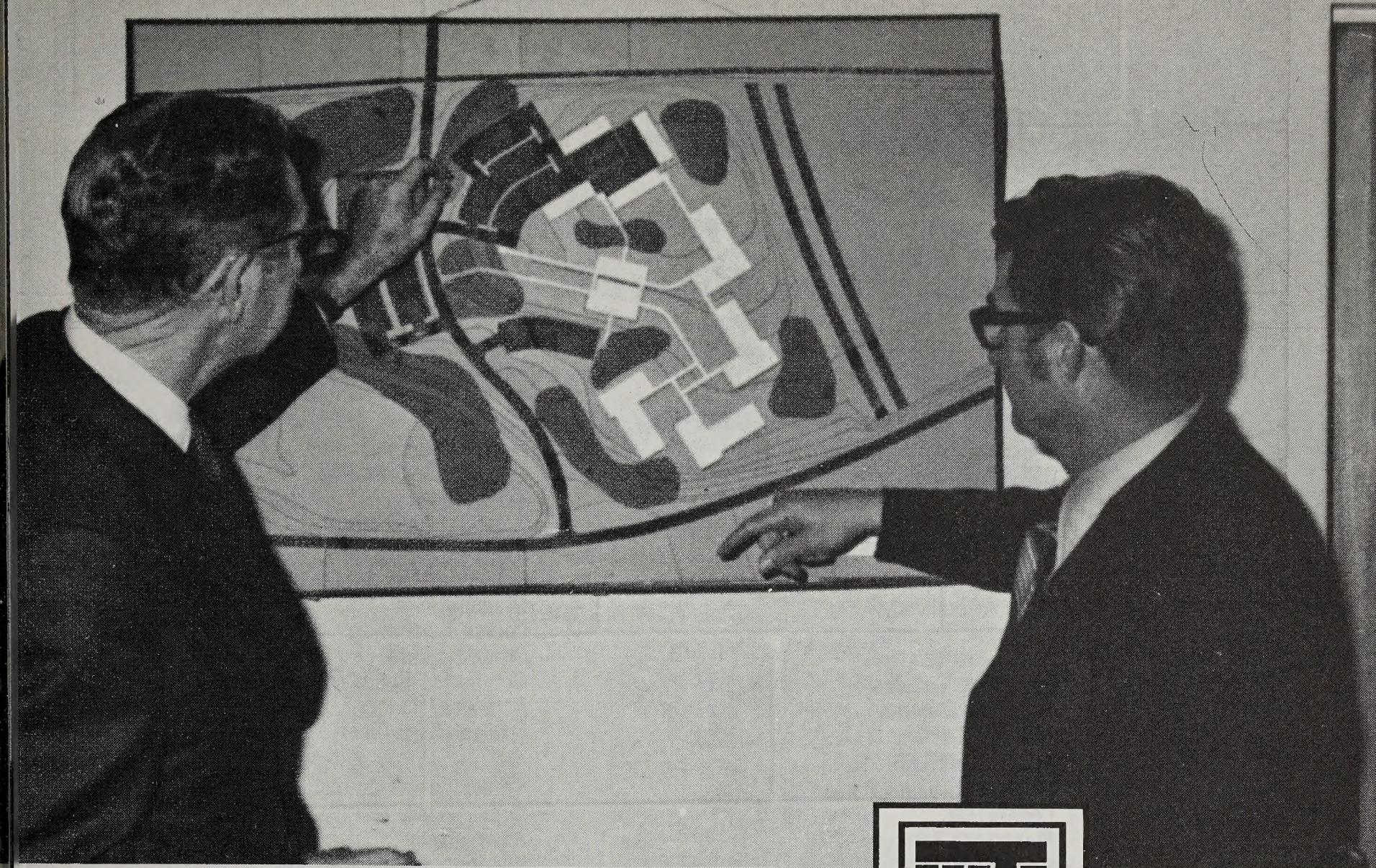
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GENERAL
CATALOG
1971-73

McDOWELL TECHNICAL INSTITUTE / 1971-73





M^CDOWELL TECHNICAL INSTITUTE

MARION, NORTH CAROLINA 28752

GENERAL CATALOG

Volume 6

Announcements for 1971-1973

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ACADEMIC CALENDAR 1971-1973

FALL QUARTER, 1971

September 7	Registration and Orientation
September 8	First Day of Classes
September 17	Last Day to Register or Change Schedule
November 23.....	Last Day of Classes
November 24, 25, 26	Thanksgiving Holidays

WINTER QUARTER, 1971-72

November 29.....	Registration
November 30.....	First Day of Classes
December 9.....	Last Day to Change Schedule
December 20-January 2	Christmas Holidays
January 3	Winter Quarter Classes Resume
February 28.....	Last Day of Classes

SPRING QUARTER, 1972

March 6	Registration
March 7	First Day of Classes
March 16	Last Day to Change Schedule
March 31-April 3.....	Easter Holidays
May 24	Last Day of Classes

SUMMER QUARTER, 1972

June 7.....	Registration
June 8.....	First Day of Classes
June 19.....	Last Day to Change Schedule
July 3, 4	Independence Day Holidays
August 24	End of Summer Quarter
August 25	Graduation

FALL QUARTER, 1972

September 5	Registration and Orientation
September 6	First Day of Classes
September 15	Last Day to Register or Change Schedule
November 21.....	Last Day of Classes
November 22, 23, 24.....	Thanksgiving Holidays

WINTER QUARTER, 1972-73

November 27.....	Registration
November 28.....	First Day of Classes
December 7.....	Last Day to Change Schedule
December 18-January 1	Christmas Holidays
January 2	Winter Quarter Classes Resume
February 26.....	Last Day of Classes

SPRING QUARTER, 1973

March 5	Registration
March 6	First Day of Classes
March 15	Last Day to Change Schedule
April 20-23	Easter Holidays
May 24	Last Day of Classes

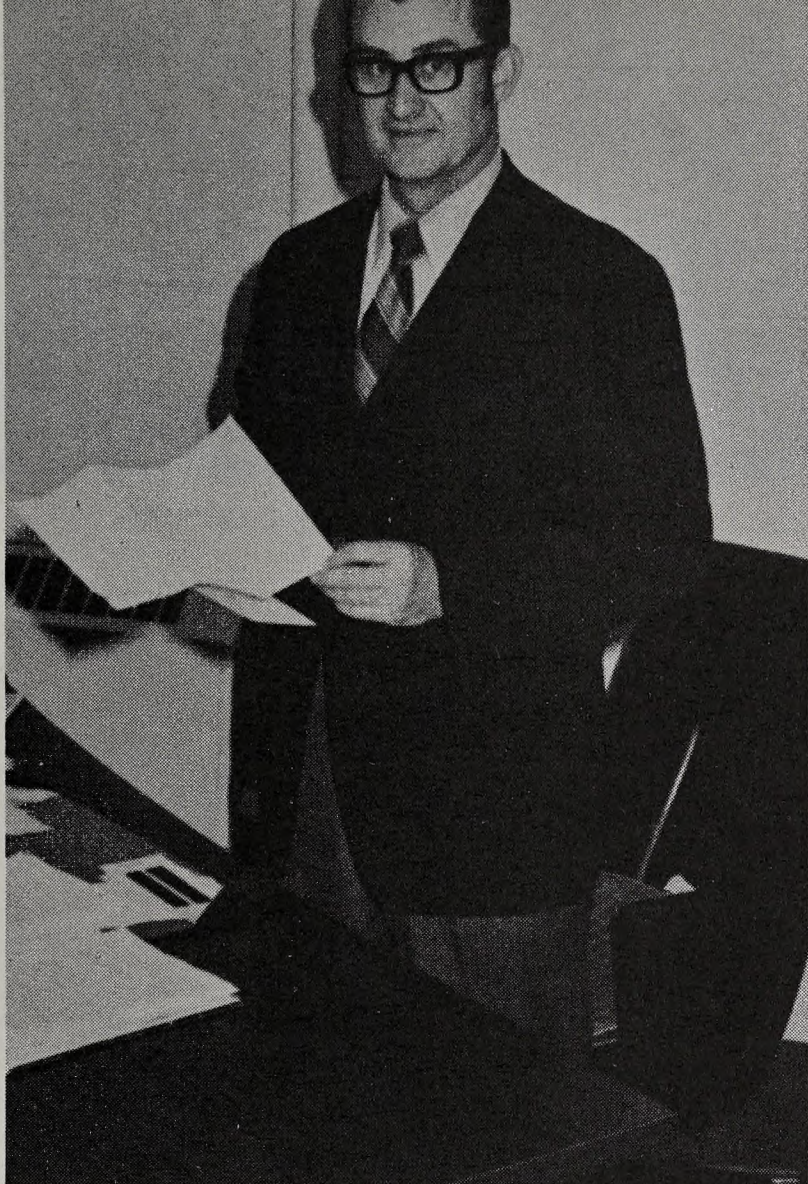
SUMMER QUARTER, 1973

June 7.....	Registration
June 8.....	First Day of Classes
June 18.....	Last Day to Change Schedule
July 4	Independence Day Holiday
August 23	End of Summer Quarter
August 24	Graduation

THE BOARD OF TRUSTEES



Charles Allman	Pleasant Gardens, North Carolina
Vernon T. Eckerd, Chairman	Marion North Carolina
James E. Johnson.....	Marion, North Carolina
Robert J. Noyes	Marion, North Carolina
John A. Price, Secretary	Marion, North Carolina
Paul Story	Marion, North Carolina
Charles A Turner, Vice-Chairman.....	Marion, North Carolina
Joe Tyler	Marion, North Carolina
Gale Wade	Dysartsville, North Carolina



PRESIDENT'S MESSAGE

So You Are Thinking About Coming To McDowell Technical Institute

You are taking one of the most important steps toward shaping your future—planning for further education.

Your happiness and well-being throughout life depend on how well you prepare yourself for work and responsibility during all coming years. It does not matter whether you are a high school senior, or already employed, or an older citizen looking for ways to enrich and strengthen your later working years. MTI offers programs to help you reach **YOUR** goals. We can help you choose among several programs designed to meet a wide range of needs, interest and abilities.

Our economy today depends upon well-educated people. Skills, knowledge and responsible attitudes are the base for our society, of which you must be a working member. Unskilled and unprepared people, at any age, will have an increasingly difficult time adapting to the growing demands placed upon us all.

MTI is dedicated to helping you with your education. We can't give you an education; you have to do the learning for yourself. But we can provide effective, interesting, challenging means for learning, and an environment facilitating exploration, inquiry, and the search for your most satisfying interests and the most effective areas in which you can work.

There are a number of steps you can take to make the right decisions about your educational career: **START YOUR OWN PLANNING NOW.** Select a program which appeals to you, then take steps to enroll in that program at MTI.

IF YOU ARE IN HIGH SCHOOL, talk to your counselor right away; he is in a good position to assist you. He has application forms and other information, and can arrange to have your school transcript forwarded to us.

IF YOU ARE ALREADY BEYOND HIGH SCHOOL, call or visit MTI.

We'll welcome you at MTI, and we'll help you in any way we can to find what will appeal to you, and prepare you for a bright future.

John A. Price, President
McDowell Technical Institute

ADMINISTRATIVE PERSONNEL

John A. Price, President

Jerry L. Van Dyke	Director, Occupational Education
Robert Knox	Director of Extension Division
Paul L. English	Director, Adult Education Division
Robert L. Smithers	Director, Student Personnel Services
Charles E. McKinney	Coordinator, Learning Laboratory
James V. McMahan	Coordinator, Learning Laboratory
Mrs. Joyce B. Orndoff	Librarian
Mrs. Katherine Young	Bookkeeper

FACULTY

James R. Brown	Auto Mechanics
Larry W. Brown	Related Subjects Instructor
Ben Burrill	Electrical Installation and Maintenance
Janet G. Estes	Business Secretarial
Pete Hamlin	Auto Body Repair
Neal Waters	Welding
Thomas E. Whitson	Air Conditioning and Refrigeration
Everette C. Wilkie	Related Subjects Instructor
Sandra J. Winkler	Business Administration

SECRETARIAL STAFF

Mrs. Mildred Reese	Secretary to the President
Miss Teresa Helms	Secretary, Extension Division
Mrs. Ruth Hughes	Secretary, Adult Education Division
Mrs. Ann Clontz	Secretary, Student Personnel Services



GENERAL INFORMATION

MCDOWELL TECHNICAL INSTITUTE UNIT OF DEPARTMENT OF COMMUNITY COLLEGES

ESTABLISHED MAY, 1964

BOARD OF TRUSTEES

VERNON T. ECKERD, CHAIRMAN	CHARLES A. TURNER, VICE CHAIRMAN
PAUL J. STORY	CHARLES ALLMAN
GALE WADE	JAMES E. JOHNSON
J. NEAL MORRIS	PAUL BROOKS

JOHN A. PRICE, PRESIDENT

ARCHITECTS - BABER & WOOD

GENERAL CONTRACTOR - W. E. DALE CONSTRUCTION CO.

PLUMBING AND HEATING - TOMLINSON PLUMBING & HEATING CO.

ELECTRICAL - HOME ELECTRIC CO.

FIRST CONSTRUCTION PHASE COMPLETED 1970

COUNTY COMMISSIONERS

O. D. ROWE, CHAIRMAN

J. B. WALKER, JR.

PIERCE S. BRADLEY, JR.



GENERAL INFORMATION

HISTORY OF THE INSTITUTE

McDowell Technical Institute formerly known as the Marion-McDowell Industrial Education Center was established in May, 1964 as a satellite unit of the Asheville-Buncombe Technical Institute. The Institute operated until September, 1967, under the leadership of the Asheville Technical Institute and a local advisory committee. In 1967 the Institute became an independent unit of the Department of Community College System and more autonomy was given as a result of the appointment of an eight member Board of Trustees. Since its opening date, the institute has made continuous growth and many changes have taken place.

During the Summer, 1970, students and staff moved into McDowell Technical Institute's new facilities on a 31 acre tract off Interstate 40 and highway 226. Starting the new academic year in the Fall, the number of curriculum students that registered not only represented a new high in terms of enrollment, but also emphasized the need for more space. Considering the need for expansion, the President of the Institute and members of the Board of Trustees embarked on a proposed building program to make available more classroom space, permanent Library facilities, an enlarged student lounge and additional offices for faculty and staff.

The educational service area of the Institute includes McDowell, Mitchell and Yancey counties. Since the Institute was established, it has reached more than 6,000 adults 18 years of age or older in the tri-county area.

PURPOSE AND OBJECTIVES

McDowell Technical Institute was established to serve the people and industry of this area by providing a comprehensive post-high school education program. Available are programs in college transfer, technical, business, vocational-trade, adult education, upgrading, cultural and avocational courses. In addition, guidance services are available for both in-school and out-of-school citizens.

The Institute seeks to develop the skills, knowledge, abilities, and attitudes of each student for entry and progress within an occupational field. For employed persons courses are designed to upgrade and increase their present skills and knowledge.

In addition, McDowell Tech provides an opportunity for all adults to further their basic elementary and high school education, to create and develop cultural and avocational interest, and to acquire knowledge and habits required for more effective citizenship and family living.

The Faculty and Administrative Staff strive towards fulfilling the Institute's stated objectives by providing:

Expanded Educational Opportunities for young people and adults who would not otherwise continue their education.

Relatively Inexpensive Educational Opportunities for High School graduates, school drop outs, and adults.

Technical Programs, preparing students for jobs in industry, business, and service occupations.

Vocational Programs of less than Technical level, preparing students for jobs requiring different levels of ability and skill.

A College Program, consisting of the first two years of college studies.

Short courses in the interest of the general public and service needs of the community.

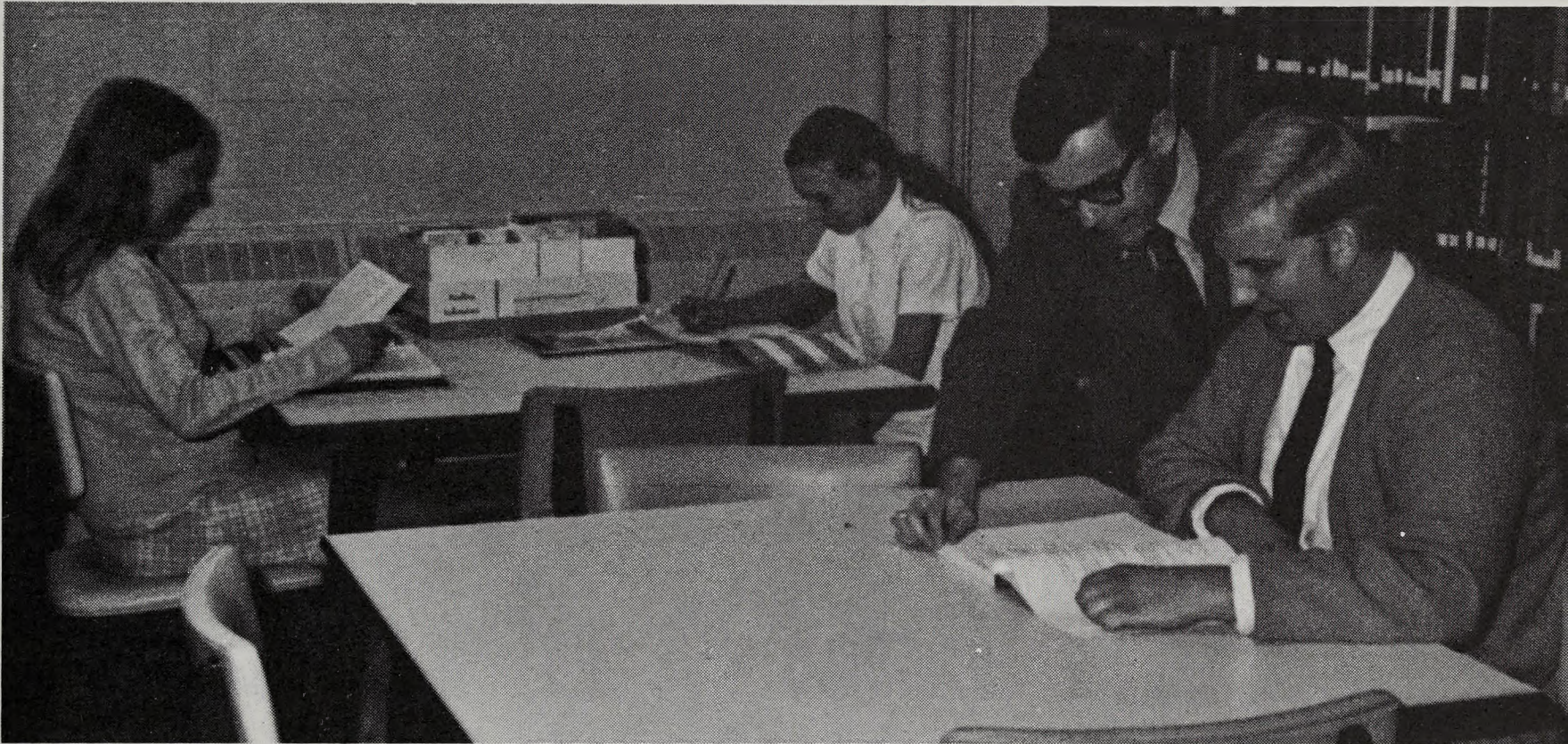
STATE ACCREDITATION

McDowell Technical Institute is accredited by the State Board of Education of North Carolina.

LIBRARY

The Library, which began operation in 1969, has acquired approximately 4700 volumes as a basic collection to support existing programs of instruction. New books are being added continually and there are forty-five periodicals available. The open-shelf system is used: students are encouraged to browse and use the facilities to study.

The Library supplements classroom instruction by making available a selection of audio-visual material and providing inter-library loan services.



LEARNING LABORATORY

The Learning Laboratory is one of the most versatile of all the learning concepts utilized by the Community College System. The Laboratory uses the Programmed Material approach and offers planned study in all of the areas served by the Institute. The programmed material is designed in such a manner as to aid the student in learning information in small sequences. Each sequence requires an immediate response, and each response is immediately checked. If the student fails to learn, or learns incorrectly, the program makes the correction or re-teaches. Probably the most significant factor for its tremendous success is that it allows the student to progress at his own rate without the necessity of being held back or keeping up with a class.

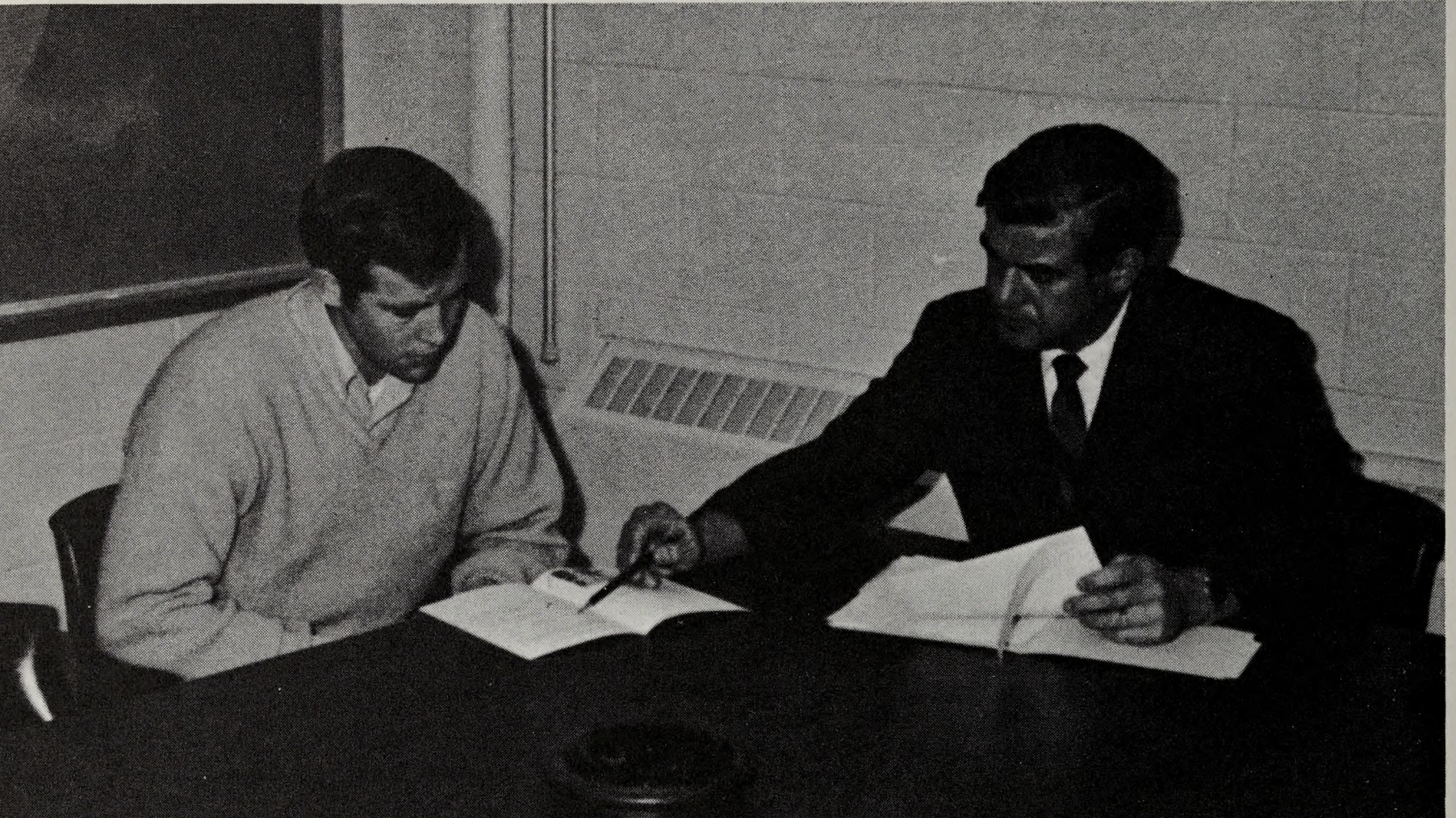
Because there are no classes in the Learning Laboratory, any person eighteen years of age or older can enroll immediately. Each student schedules his own work session with the Learning Lab Coordinator. The Coordinator has the responsibility of locating the level at which a student will undertake to achieve his desired goal. He administers tests to assure that the student is approaching his goal.

McDowell Technical Institute has been officially designated as a General Educational Development Testing Center. The G.E.D. Test is administered through the Learning Laboratory. The primary use of the G.E.D. examination is to appraise the

educational development of adults who have not completed their formal high school education. Eligibility requirements to take the G.E.D. examination are as follows:

1. Eighteen years of age or older. The applicant must have been out of a regular high school program for at least six months.
2. The applicant is a resident of the State.

Anyone interested in taking this examination may contact the Learning Laboratory for additional information.



Admission Requirements: Any adult who has a desire to raise his or her educational level and who is able to benefit from this type of study.

Expenses or Fees: There is no charge for study in the Learning Laboratory.

Hours: 8:00 a.m. — 10:00 p.m. Monday — Thursday
8:00 a.m. — 4:00 p.m. Fridays

EVENING PROGRAM

The Institute offers credit and non-credit courses through the Evening Program. This service is provided to make educational opportunities available to those who are employed during the day.

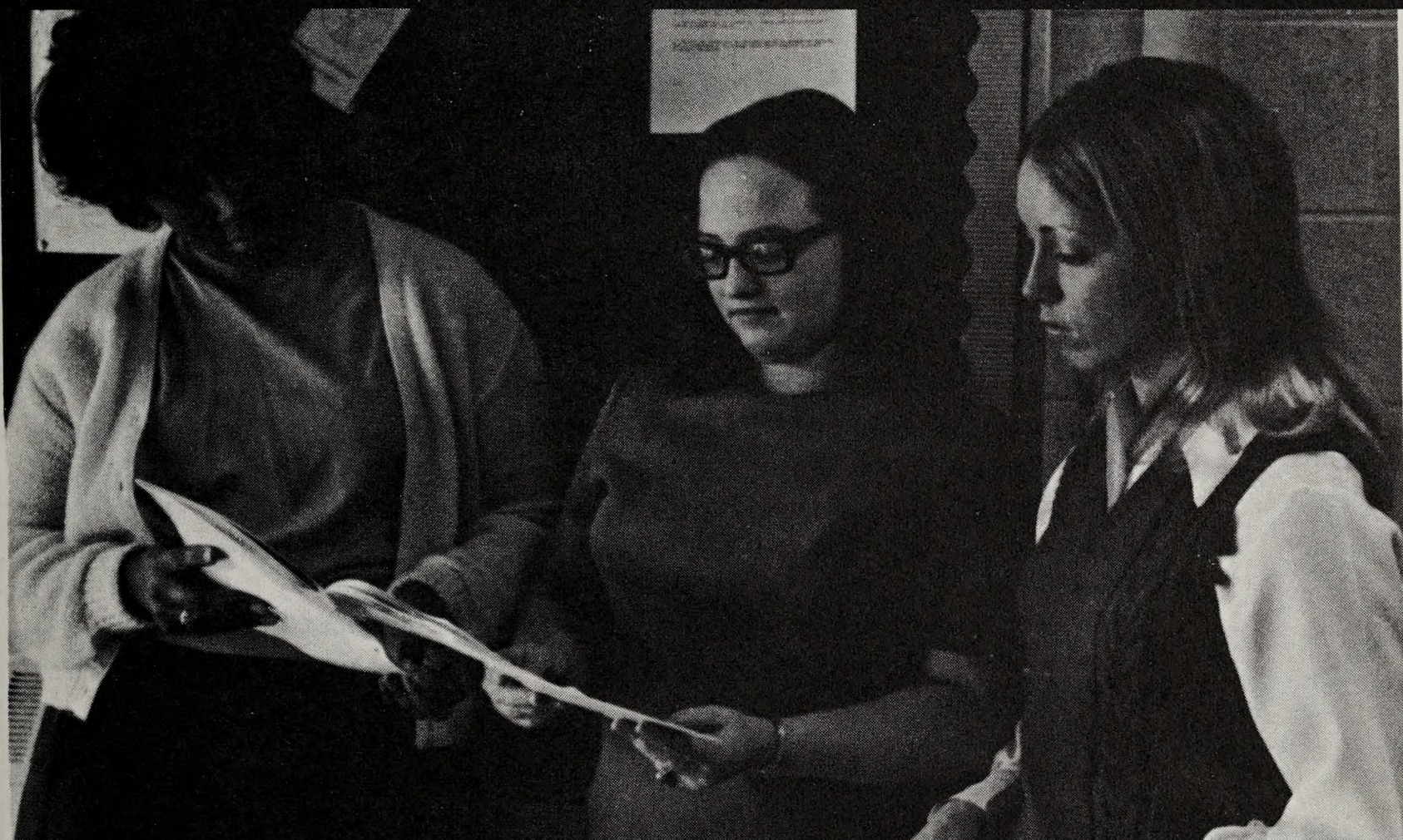
ADMINISTRATIVE REGULATIONS

Office Hours: The administrative offices of the Institute are open Monday through Thursday from 8:00 A.M. to 4:30 P.M. On Friday, the offices are open from 8:00 A.M. to 4:00 P.M.

Changes in Policies and Regulations: McDowell Technical Institute reserves the right to make changes in the regulations, fees and other matters of policy and procedure as and when deemed necessary.

Traffic Regulations: The maximum speed permitted on campus shall not exceed 30 M.P.H. Reckless driving observed on campus will result in disciplinary action. Students are warned to park their cars in **assigned student parking areas**.

ADMISSIONS AND FINANCIAL INFORMATION



ADMISSIONS INFORMATION

REQUIREMENTS FOR ADMISSIONS

McDowell Technical Institute operates under an "Open Door" admissions policy. Any high school graduate or individuals 18 years of age or older, whether they are high school graduates or not, who apply for admission to the institute, will be accepted providing that they meet the specified requirements in the division that they desire to enter.

The admission procedure requires with the exception of the Adult Education and College Transfer programs, that all students submit the following forms:

1. A completed application for admission. A deposit of \$5.00 must accompany each application. The deposit is not refundable but will be applied towards the tuition fee for the first quarter.
2. Transcript of secondary school education. Transfer students will also be required to submit a transcript(s) of all previous academic work.
3. Verification of a physical examination.
4. Completion of the Placement Test Battery.
5. Test results will be reviewed and course recommendations made when the student initially enrolls in the Institute.

Students are cautioned that unless all applicable supporting documents for admission are acknowledged by the Student Personnel Office prior to their initial registration, permission to register for classes will be denied. In case of extenuating circumstances a **conditional** admission to the Institute may be granted.

DIVISIONAL REQUIREMENTS

College Transfer Division

PROSPECTIVE STUDENTS ARE ADVISED THAT ALL ADMISSIONS FORMS AND RELATED INFORMATION LISTED BELOW SHOULD BE DIRECTED TO McDOWELL TECHNICAL INSTITUTE IN CARE OF THE OFFICE OF STUDENT PERSONNEL SERVICES.

Applicants may be admitted to the Appalachian State University Extension Program by meeting the following requirements:

1. A completed application for admission. Appalachian State University requires a \$10.00 application fee.
2. Graduation from an accredited high school and rank in the upper seventy-five per cent of their graduating class. If the applicant is not a high school graduate, a High School Equivalency Certificate is required.
3. Satisfactory recommendation by the high school principal and/or guidance counselor.
4. Presentation of at least two units of high school mathematics (2 units of algebra or 1 unit each in algebra and geometry).
5. Satisfactory scores on the College Entrance Examination Board Scholastic Aptitude Test.

This test is required of every applicant for freshman admission and is given in November, December, January, March, May, and July. End of junior year (in high school) scores are used to determine eligibility for freshman admission when reported with early applications. It is recommended that the test be taken at the end of the junior year of high school and repeated early in the senior year of high school.

A student wishing to take this test should procure an application form from his secondary school or should write directly to the College Entrance Examination Board, Box 592, Princeton, New Jersey, for the **Bulletin of Information**, which includes an application form and is available without charge. The Bulletin lists test centers and gives complete information concerning tests.

The student must make his own arrangements well in advance of a selected testing date so that his application is received in Princeton before the deadline for filing applications.

6. A satisfactory health record. The complete medical history of each applicant must be submitted on the medical form supplied by the Admissions Office after approval has been given.

TECHNICAL DIVISION

The applicant must be a graduate of an accredited secondary high school or he must have been awarded a high school equivalency certificate.

Vocational Division

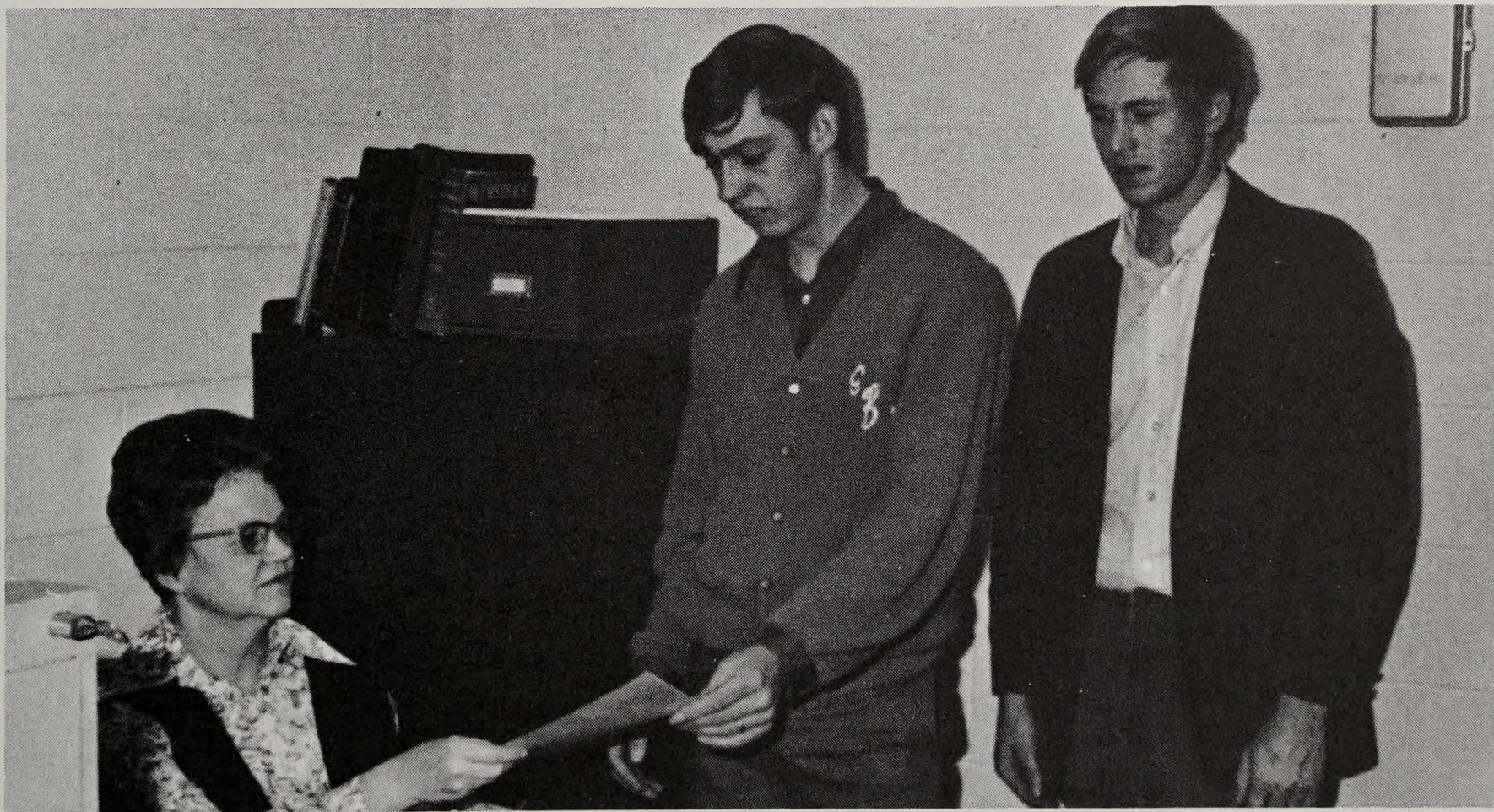
The applicant must be at least eighteen years of age.

Transfer Students

The Institute will accept any transfer student, who has maintained a satisfactory conduct standing in his previous institution. Credits and their respective quality points will be granted for courses similar in content, objective, and quality to those included in the North Carolina Community College System, as well as from other accredited colleges, Technical Institutes, Business and Vocational Institutions.

Students on disciplinary suspension from other institutions are not eligible for admission.

Transfer students are required to submit a **LETTER OF GOOD STANDING** from previous institutions attended. In addition, students transferring less than 15 quarter hours of acceptable credit will be required to take the Placement Test Battery.



FINANCIAL INFORMATION

McDowell Technical Institute receives financial support from local, state and federal sources, allowing each student an educational opportunity at minimum cost. Tuition fees are set by the State Board of Education and are subject to change without notice. Cost of textbooks and supplies are additional expenses which vary according to the program of study. The payment of fees is required at the time of registration. If a student cannot pay his fees at the specified time he is required to make some arrangement with the Business Office before his registration is complete.

Tuition and Fees

The tuition rates are explained as follows:

College Transfer Division	In State		Out of State
Application Fee (Non-refundable)	\$10.00		\$10.00
11 quarter hours or more (per quarter)	32.00		80.00
Less than 12 quarter hours (per quarter hour)	2.50		6.25

NOTE: Students enrolled in the college extension program offered by Appalachian State University are subject to the same tuition rate that is applicable to other programs of study offered at McDowell Technical Institute.

Technical Division

Application Fee (Non-refundable)	\$ 5.00	\$ 5.00
11 quarter hours or more (per quarter)	32.00	80.00
Less than 12 quarter hours (per quarter hour)	2.50	6.25
Graduation Fee (Spring Registration Only)	12.00	12.00

Vocational Division

Application Fee (Non-refundable)	\$ 5.00	\$ 5.00
11 quarter hours or more (per quarter)	32.00	80.00
Less than 12 quarter hours (per quarter hour)	2.50	6.25
Graduation Fee (Spring Quarter Registration Only)	12.00	12.00

Late Registration Fee

Students who do not pay their tuition or fees on the assigned date will be assessed a \$2.00 late charge.

Refund Policy

The Institute has and maintains the following policies for the refund of tuition in the event the person fails to enter, withdraws, or is discontinued from his program of study prior to completion:

(A) "Tuition refund for students shall not be made unless the student is in the judgement of the Institute, compelled to withdraw for unavoidable reasons. In such cases, two-thirds of the tuition of the student's tuition may be refunded if the student withdraws within ten calendar days after the first day of classes as published in the school calendar. In the event that a course or curriculum fails to materialize, the entire tuition will be refunded."

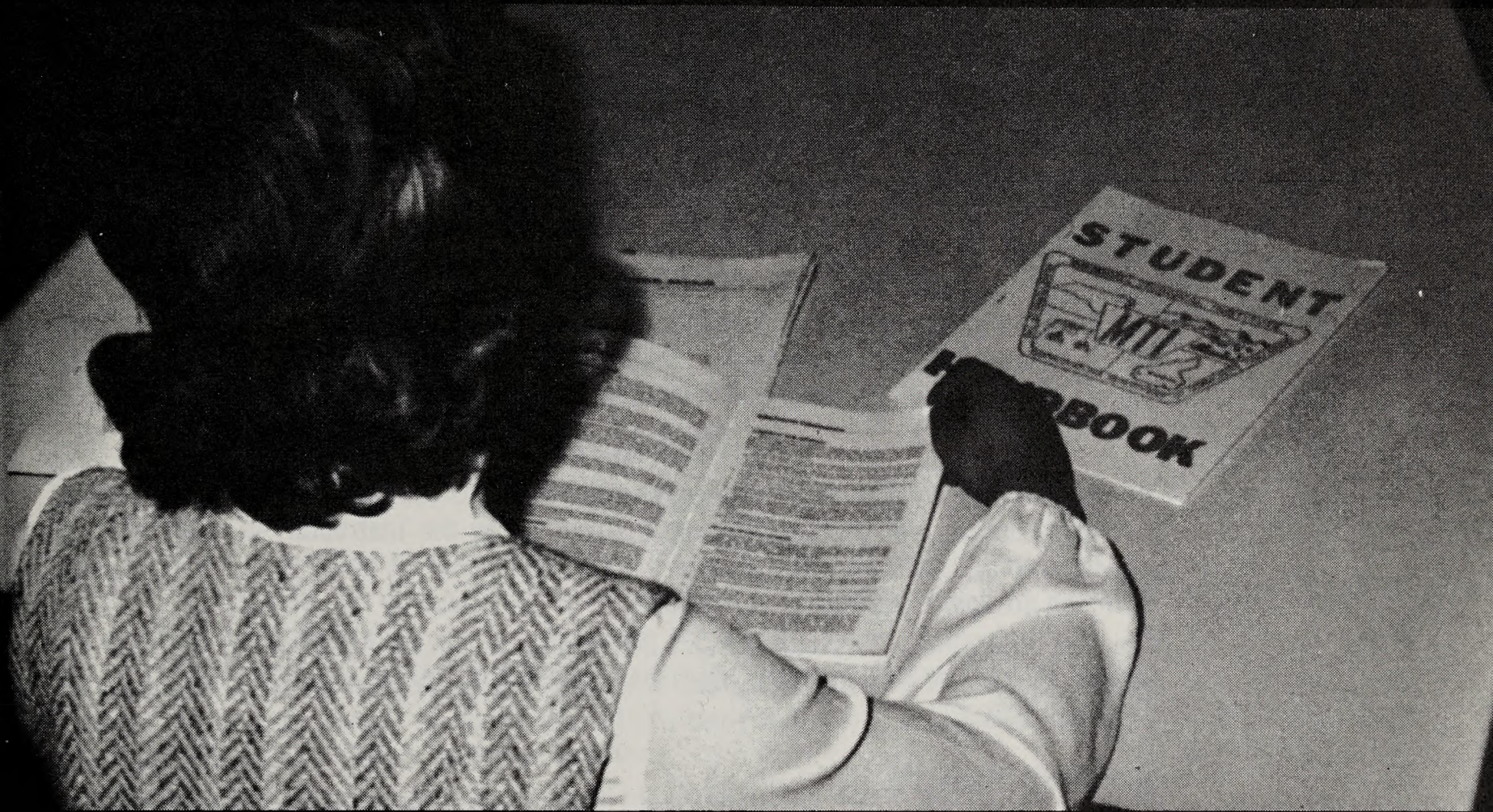
(B) "Veterans and war orphans receiving benefits under Title 38, U. S. Code, will be refunded the pro rata portion of the tuition fee not used up at the time of their withdrawal from the Institute."

Financial Assistance

Financial assistance is available at the Institute on a limited basis. Tuition scholarships are provided by local civic clubs and organizations.

Students needing financial aid are requested to contact the Student Personnel Office for an application.

ACADEMIC INFORMATION



ACADEMIC INFORMATION

DEGREES, DIPLOMAS, AND CERTIFICATES

McDowell Technical Institute awards the ASSOCIATE DEGREE in APPLIED SCIENCE (A.A.Sc.) upon successful completion of a two-year program of study in the Accounting, Business Administration and Executive Secretarial curriculums.

Upon completion of a vocational program of study one or more years in length, McDowell Technical Institute grants a DIPLOMA in the major area of training.

CERTIFICATES of course completion are awarded in non-credit Extension courses.

ADULT HIGH SCHOOL EQUIVALENCY CERTIFICATES are awarded by the North Carolina Department of Public Instruction to individuals who make satisfactory scores on the General Educational Development (G.E.D.) examination.

POLICIES ON CLASS ATTENDANCE

Vocational Students

Any student enrolled in a vocational program who is absent for a total of four (4) consecutive or five (5) cumulative days in a particular course during an academic quarter may be dropped from that course by the instructor.

Technical Students

Any student enrolled in a technical program who has four (4) consecutive absences in a given course **will** be dropped from that course by the instructor. In addition, any student who accumulates more absences than the number of hours that a class meets during an academic quarter may be dropped from that class by the instructor.

ANY PERSONAL CIRCUMSTANCES INVOLVING STUDENT ABSENCE(S) SHOULD BE REPORTED TO THE INSTRUCTOR, WHO HAS THE PREROGATIVE TO MAKE EXCEPTIONS TO THESE POLICIES.

ACADEMIC REFERRAL

Any student whose cumulative grade point average is less than 1.00 at the end of any quarter will be instructed to report to the Director of Student Personnel for counseling. The sole purposes of these meetings is to attempt to identify the problems the student encountered.

REPEATING COURSES

There is no provision for allowing students to repeat courses. In addition, the Institute requires that a student earn an overall 2.00 grade point average with all grades being passing or better, in order to be a candidate for graduation.

Students are advised to consult with their respective instructors or the Student Personnel Counseling staff if they are in danger of failing a course.

SCHEDULE CHANGES

All changes involving dropping or adding of course(s) shall be adjusted during the first ten days of classes each quarter. The following steps must be adhered to before changes are official:

1. The Student secures a Registration Change Notice from the Student Personnel Office.
2. Individual schedule changes must be approved by the appropriate instructor.
3. Notification of schedule changes must be acknowledged and recorded by the Student Personnel Office.

A student may change his academic schedule during the prescribed period without scholastic penalty. However, any course dropped after the first ten days of classes will be marked WP (Withdrew Passing) or WF (Withdrew Failing). A WF carries the same stigma as an F (Failure).

GRADING SYSTEM

McDowell Technical Institute is on a quarter system. Grades will be issued at the conclusion of each quarter based on the following system:

Grade	Numerical Range	Significance	Quality Points
A	93-100	Excellent	4 per quarter hour
B	86-92	Good	3 per quarter hour
C	78-85	Fair	2 per quarter hour
D	70-77	Passed	1 per quarter hour
F	Below 70	Failed	0
W	—	Withdrawal	0
WP	—	Withdrawal Passing	0
WF	—	Withdrawal Failing	0
I	—	Incomplete	0
AU	—	Audit	0
S	—	Satisfactory	0
U	—	Unsatisfactory	0

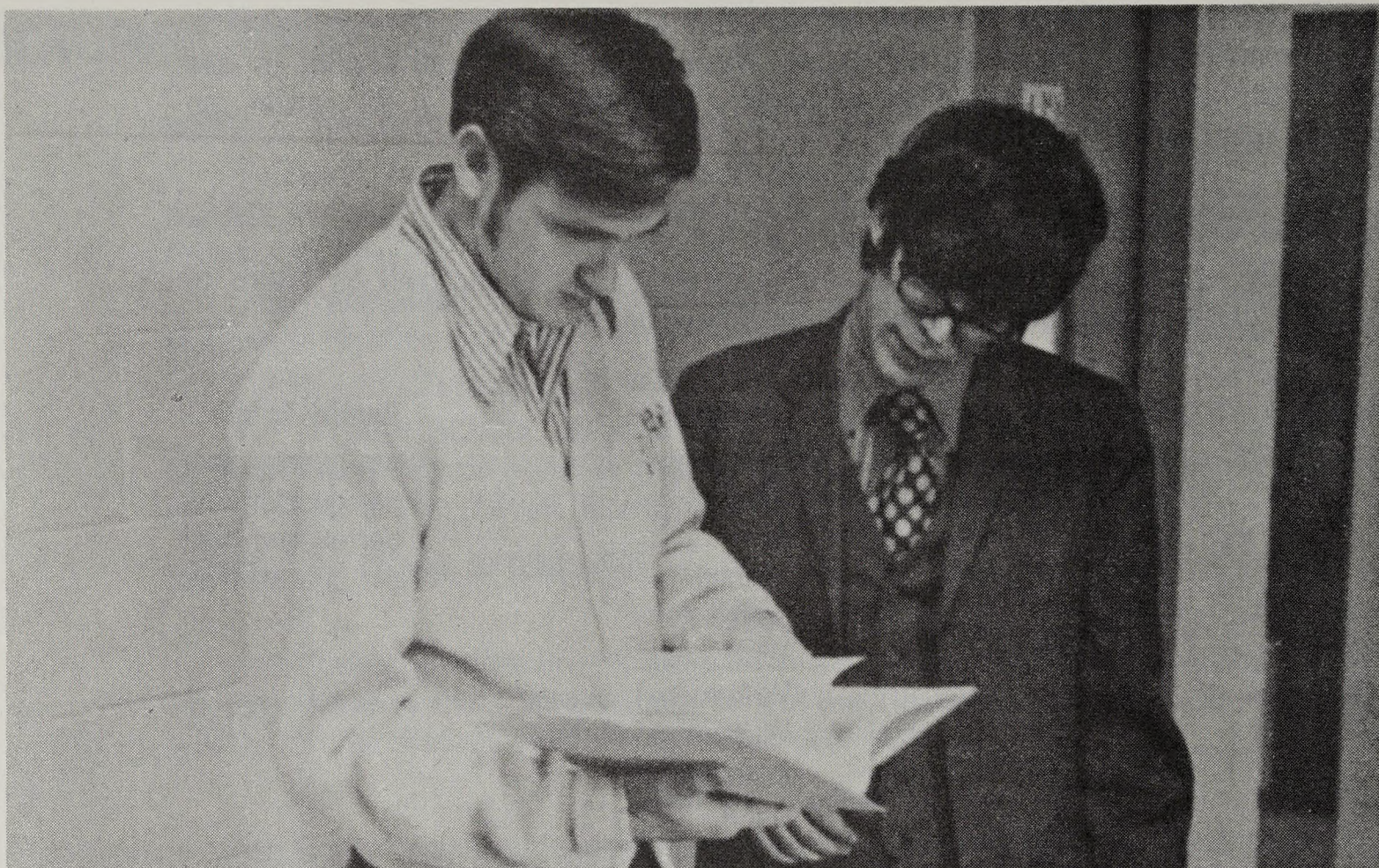
A grade of "I" is assigned when the course work is complete. This grade can be removed if the course work is completed satisfactorily within six weeks starting from the registration date of the following quarter.

Grade point averages are determined by dividing the total number of quality points by the number of hours attempted. If a course is repeated, the last grade will be used in determining a student's hour-quality point ratio. A ratio 2.00 indicates that the student has an average of C; above 2.00 indicates that the student has an average above a C; below 2.00 indicates that he has an average below C.

PROCEDURES FOR STUDENT WITHDRAWAL

To officially withdraw from the Institute or from a course, the student must follow these procedures:

1. The student will report to the Director of Student Personnel Services and request that he be withdrawn from classes.
2. The official date of a student's withdrawal from the institute is the exact date that he makes his request for withdrawal. The student Personnel Office notifies each instructor of the name of the student and the official date of his withdrawal.
3. A student may withdraw during the first two weeks of the quarter without scholastic penalty. This procedure, if followed will entitle the student to have his permanent record show the notation "withdrawn". This notation indicates good standing and the privilege of readmission.
4. Any student who withdraws after the first two weeks of the quarter will receive a grade of "WP" or "WF". A student who withdraws unofficially from the Institute without following official procedures will receive the grade of "F" in each course that he is registered for.



EXAMINATIONS

Final examinations in all subjects will be held in November, March, April and August respectively. The examination score combined with the student's record in class will constitute the final grade.

COURSE NUMBERING

Courses in McDowell Technical Institute's catalog are numbered in accordance with the North Carolina Department of Community College System.

1. (a) All Freshman technical courses are indicated by a prefix, numbered between 100-199 and preceded by the letter "T".

(b) All sophomore technical courses are indicated by a prefix, numbered between 200-300, and preceded by the letter "T".

2. All vocational courses are indicated by a prefix and numbered between 1000-2000.

3. All adult education courses beyond the high school are indicated by a prefix and numbered 2000-3000.

4. All high school courses are numbered according to the North Carolina Public School course number system.

GRADE REPORTS

Final grade reports are furnished to the student approximately two weeks following the end of each quarter.

GRADUATION REQUIREMENTS

The following list constitutes the minimum requirements for the Associate in Applied Science degree and State Diploma:

1. Complete all course requirements as outline by curriculums. Achieve an overall grade point average of 2.00 or above with all grades being passing or better.

2. Students who fail individual subjects or have incomplete grades must make up such deficiencies before being allowed to graduate.

3. Applications for graduation must be submitted to the Student Personnel Office one quarter prior to the completion of course requirements.

4. Be present for graduation exercises which are held during the latter part of August each year. Any exception to this requirement must be made in writing and approved by the President of the Institute.

5. Fulfill all financial obligations to the Institute.

ACADEMIC HONORS

The PRESIDENT'S LIST is designed to recognize all students whose academic performance is outstanding.

To qualify for HONORS, a student is required to carry twelve (12) hours of credit during the quarter and achieve a 3.00 (B) average or better.

Any student meeting the same requirements listed above who achieves an 4.00 (A) average for the quarter qualifies for the academic ranking, "HIGHEST HONORS".

STUDENT CLASSIFICATION

Full Time Student: A student enrolled for 16 or more quarter hours is considered a full time student.

Part-Time: A student enrolled for 15 or less quarter hours is considered a part-time student.

Special Student: A student who is not enrolled in a regular curriculum and whose final objective does not include graduation from McDowell Technical Institute is classified a special student.

STUDENT SERVICES



STUDENT SERVICES

OFFICE OF STUDENT PERSONNEL SERVICES

The Office of Student Personnel Services coordinates institutional services and administrative responsibility relating to the student. This chapter deals with the services that are available to serve the student.

COUNSELING

Students are encouraged to seek counseling on matters affecting their well being. This service is available to assist students in coping with academic, personal or vocational problems.

The Student Personnel Office operates for the benefit of all students enrolled at the Institute. Occupational and educational information is available and students are encouraged to utilize this material.

PLACEMENT SERVICE

The placement of graduates in appropriate fields of employment cannot be guaranteed by the Institute. Every effort will be made to notify students of available positions.

Students will be asked to file a Personal Data Sheet with the Student Personnel Office. This information is used for the purpose of employment referral.

HEALTH SERVICES

The Institute does not have a Health Clinic to provide hospitalization or emergency service, nor does the Institute assume responsibility for injuries that occur on campus. **Minor** injuries should be referred to the Student Personnel Office.

In the event of a **serious** accident or sickness, the following procedures should be followed:

1. Notify the President of the Institute or the Director of Student Personnel.
2. The person should not be moved, but made comfortable until help arrives.

All curriculum students enrolling in the Institute are required to have a physical examination. This information is used for the purpose of referral in the event of an emergency.



HOUSING

McDowell Technical Institute is a commuter institution and does not provide living accommodations for students. However, if the student desires to live in the community while attending classes, the Student Personnel Office will assist him in locating suitable housing.

STUDENT INSURANCE

Certain risks are inherent in any work involving regular contact with mechanical and electrical equipment. While precautions are taken to insure safety, it is felt to be in the best interest of all students to provide some measure of student protection.

At a nominal cost to students, the Institute has authorized a **voluntary** group accident program. Coverage extends for the entire year for a cost of \$2.50 per person. Applications for coverage can be secured in the Student Personnel Office.

STUDENT LOUNGE

Light lunches can be secured from food and drink vending machines in the Student Lounge.

ORIENTATION

Each Fall Quarter, an Orientation program is held for new students to acquaint them with basic ideas, procedures, academic areas, administrative personnel and services of the Institute. The primary purpose for scheduling this program is to inform new students of important information about the Institute in an effort to assist them in making an easy transition to new surroundings.

TRANSCRIPTS OF PERMANENT RECORDS

Upon request by the student, a record of academic credit earned at McDowell Technical Institute will be sent to any educational institution or perspective employer.

Each student is entitled to one official transcript of his work, providing all accounts with the Institute have been settled satisfactorily. A student requesting an additional transcript(s) will be charged \$.50 per transcript for this service.

CAPS, GOWNS AND CLASS RINGS

All orders for class rings, caps and gowns, and graduation invitations will be made through the Student Personnel Office. Notices will be posted relevant to dates for measurements. Students are urged to be prompt when making these orders.

NEWSLETTER

Newsletters are disseminated throughout the year to apprise students of current events and information.



VOCATIONAL REHABILITATION

Vocational Rehabilitation is a program operated through the Division of Vocational Rehabilitation in cooperation with the North Carolina Department of Public Instruction and the Federal Office of the Vocational Rehabilitation Administration. The Division is financed by State and Federal Funds. Vocational Rehabilitation offers such services as are necessary to enable a physically or mentally-handicapped person to become self-supporting. Financial assistance is available for training at McDowell Tech. for eligible handicapped persons.

If a prospective student has a physical disability or is limited in his activity because of a disability he should contact the Division of Vocational Rehabilitation office nearest him. The Division Office for Western North Carolina is located in Asheville.

SELECTIVE SERVICE DRAFT DEFERMENTS

Selective Service requires evidence of enrollment for all students registered with them within 30 days after school opens each year. IT IS THE STUDENTS RESPONSIBILITY TO SUBMIT THE REQUEST FOR DEFERMENT FORM THROUGH THE STUDENT PERSONNEL OFFICE SO THAT ENROLLMENT CAN BE VERIFIED. These forms are made available during registration and may be obtained at any time in the Student Personnel Office.

VETERANS AFFAIRS

All programs of instruction available at the Institute are approved for training for veterans who are entitled to educational benefits under Chapters 34 and 35 of Title 38, United States Code (G. I. Bill).

The following steps should be followed in verifying eligibility:

1. The veteran fills out an application for benefits at the nearest Veterans Administration Office. The Veterans Administration Service Office serving McDowell County is located in the County Courthouse Building in Marion.

2. The VA office will send the veteran's application to the Regional Office serving the State. This office will acknowledge the veterans eligibility by mailing him a Receipt of Claim card.

3. Final verification of a veteran's entitlement is the Certificate of Eligibility. This important document must be submitted to the Student Personnel Office for certification after the veteran enrolls for classes.

The following hours constitute what is considered full-time, three quarter time, and one-half time, by VA regulations for each division:

COLLEGE TRANSFER DIVISION

Full-time	14 quarter hours of credit
3/4 time	10-13 quarter hours of credit
1/2 time	7-9 quarter hours of credit

TECHNICAL DIVISION

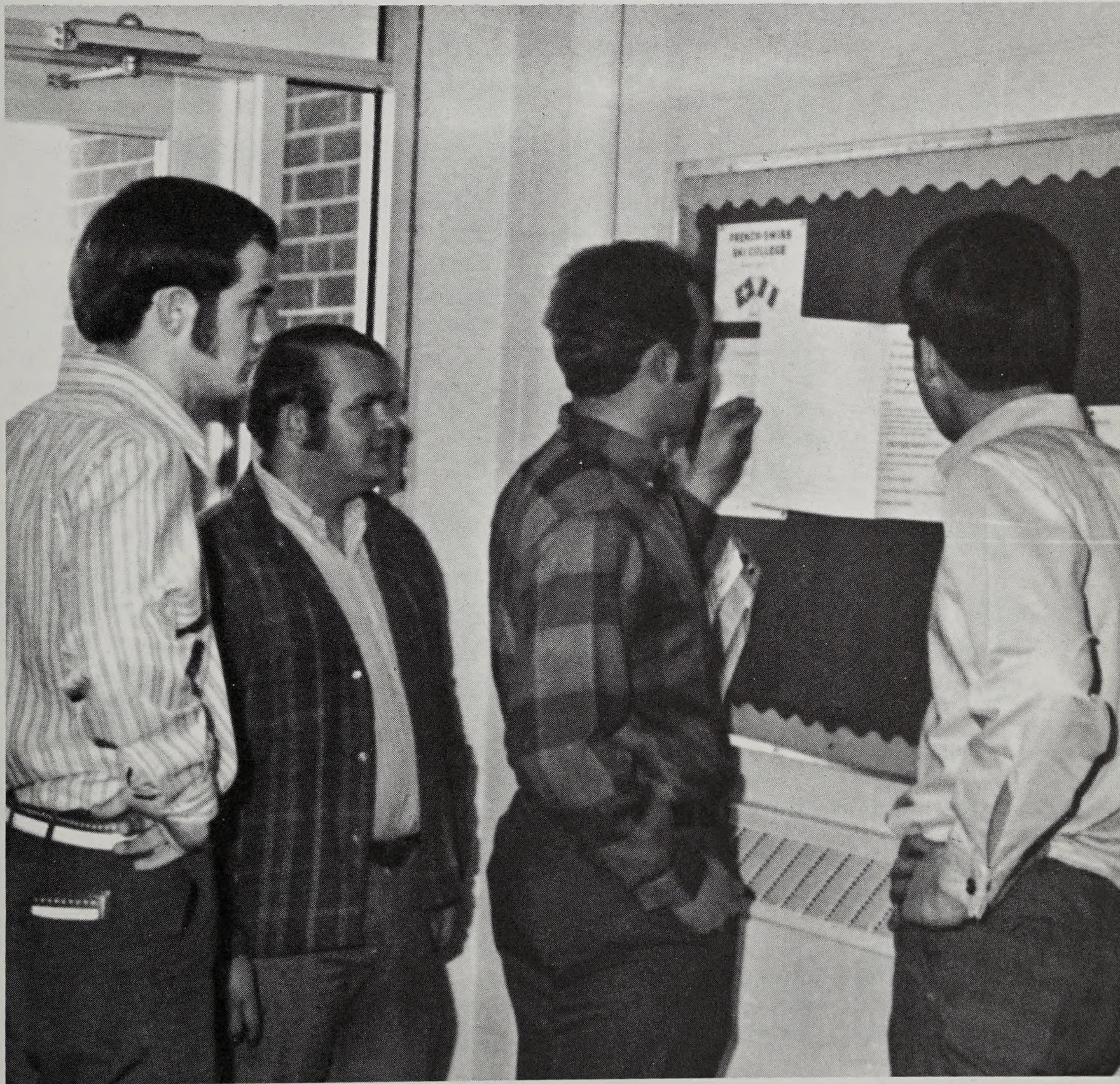
Full-time	25 clock hours per week
3/4 time	18-24 clock hours per week
1/2 time	12-17 clock hours per week

VOCATIONAL DIVISION

Full-time	30 clock hours per week
3/4 time	22-29 clock hours per week
1/2 time	15-21 clock hours per week

Students in technical and vocational programs will not be classified as full-time students for benefits under the G. I. Bill unless technical students are enrolled for twenty-five clock hours per week and vocational students for thirty hours per week. **When in any quarter the total weekly contact hours listed are fewer than twenty-five in a technical curriculum and fewer than thirty hours in a vocational trade curriculum, a student may enroll on request for additional instructional hours deemed by the institution to be consistent with the program and appropriate to the student to make up twenty-five hours per week in a technical curriculum or sufficient hours of attendance to make up thirty hours per week in a vocational trade curriculum.**

The contact hours shown in the catalog are minimal. It is the policy of this institution to permit students to enroll in additional subjects and laboratory work beyond those shown in the catalog in order to broaden this training.



STUDENT STANDARDS

CONDUCT

The conduct of a student, both in and out of school, will be measured on an adult standard. He assumes full responsibility for the consequences of his actions and behavior. Each student should accept as his personal responsibility to uphold the rules and regulations of McDowell Technical Institute. The Institute reserves the right to dismiss any student who in its judgment conducts himself in a manner that is not in compliance with the purposes of this institution.

DRESS

While the Institute aims to honor the individuality of each student, it reserves the prerogative to announce and implement regulations concerning dress.

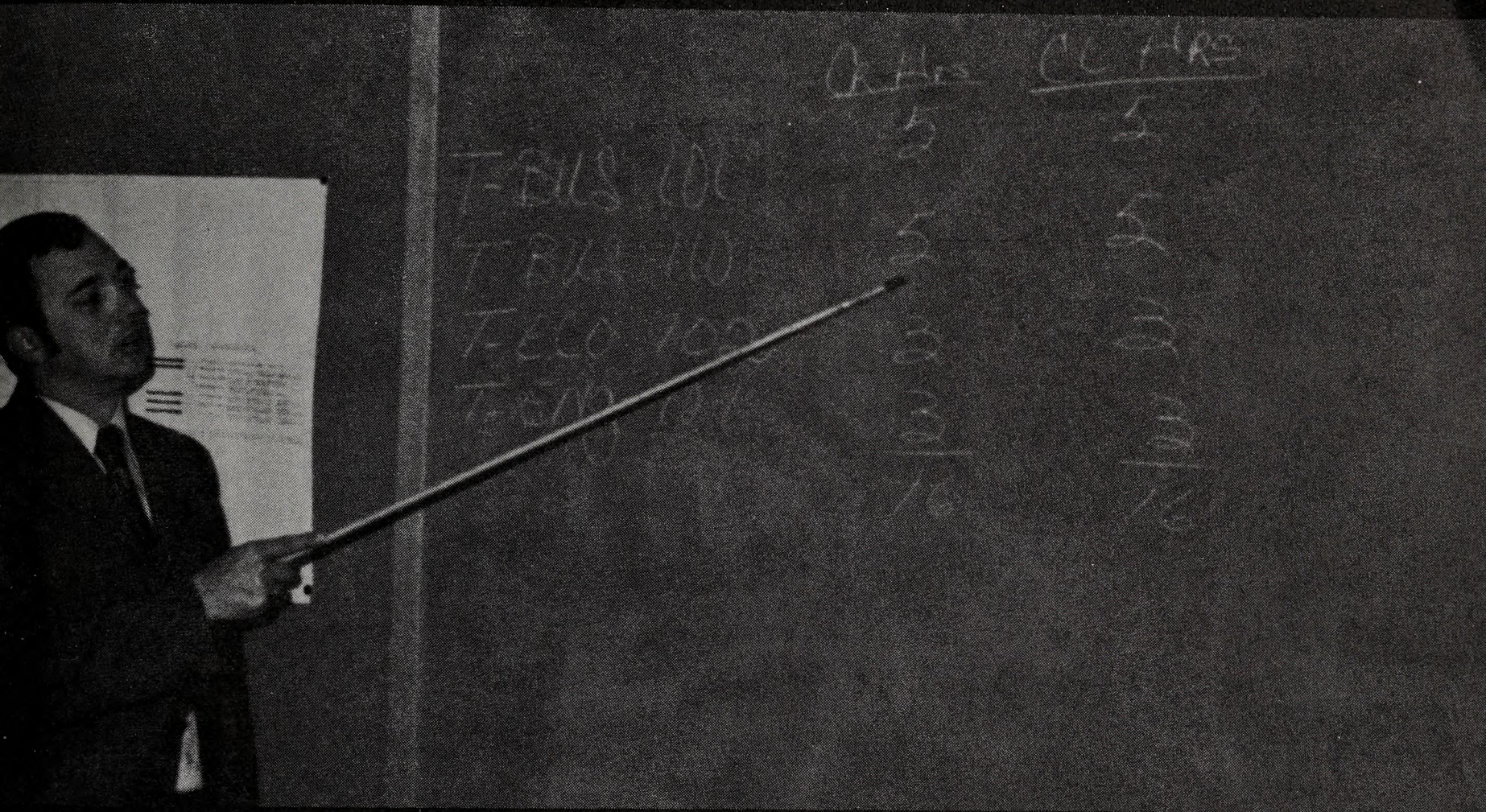
STUDENT RESPONSIBILITIES

The following standards apply to all students enrolled in this institution:

1. Each student is held responsible for information published through notices and announcements placed on bulletin boards.
2. Students who **negligently** lose, damage, destroy or dispose of school property placed in their possession or entrusted to them will be charged for the full extent of the damage or loss and are subject to disciplinary action.
3. Excessive noise will not be tolerated within the buildings. Students are asked to conduct their conversations in the Student Lounge or outside the buildings.
4. Smoking is prohibited in all classrooms and shop areas at all times. Smoking is permitted in the Student Lounge, in the halls, and outside the building.

Additional information on rules and regulations is contained in the **STUDENT HANDBOOK**. **It is the individual responsibility of each student to read and understand this HANDBOOK.**

COLLEGE DIVISION CURRICULUM



A Two Year Program of Study Offered At
McDowell Technical Institute by
Appalachian State University



APPALACHIAN STATE UNIVERSITY EXTENSION PROGRAM

McDowell Technical Institute offers a two year program of college credit through Appalachian State University. Persons enrolling in this program will become students of Appalachian State University and are subject to THEIR admission requirements. Courses will be offered at full credit. The student will be able to earn approximately 85-90 quarter hours of credit (the equivalent of two years of college work).

FIRST YEAR PROGRAM

Fall Quarter

Course	Course Title	Credit Hours
English 101	Grammar & Composition	3
History 101	World Civilization	3
Math 101	Introduction to Math	5
Physical Science 101	Man and His Environment	3
Speech 101	Fund. of Speech	3
		Total 17

Winter Quarter

English 102	Grammar & Composition	3
History 102	World Civilization	3
Physical Science 102	Man and His Environment	3
Psychology 201	General Psychology	3
		Total 12

Spring Quarter

English 103	Grammar & Composition	3
History 103	World Civilization	3
Music 217	Introduction to Music	3
Sociology 201	General Sociology	3
Physical Science 103	Man and His Environment	3
		Total 15

SECOND YEAR PROGRAM

Fall Quarter

Course	Course Title	Credit Hours
English 201	English Literature	3
Geography 101	Physical Geography	5
Sociology 202	Social Problems	3
Anthropology 210	General Anthropology	3
		Total 14

Winter Quarter

Course	Course Title	Credit Hours
English 202	English Literature	3
Geography 102	World Regions	5
Political Science 201	American National Government	3
Religion 201	Introduction to the Old Testament	3
		Total 14

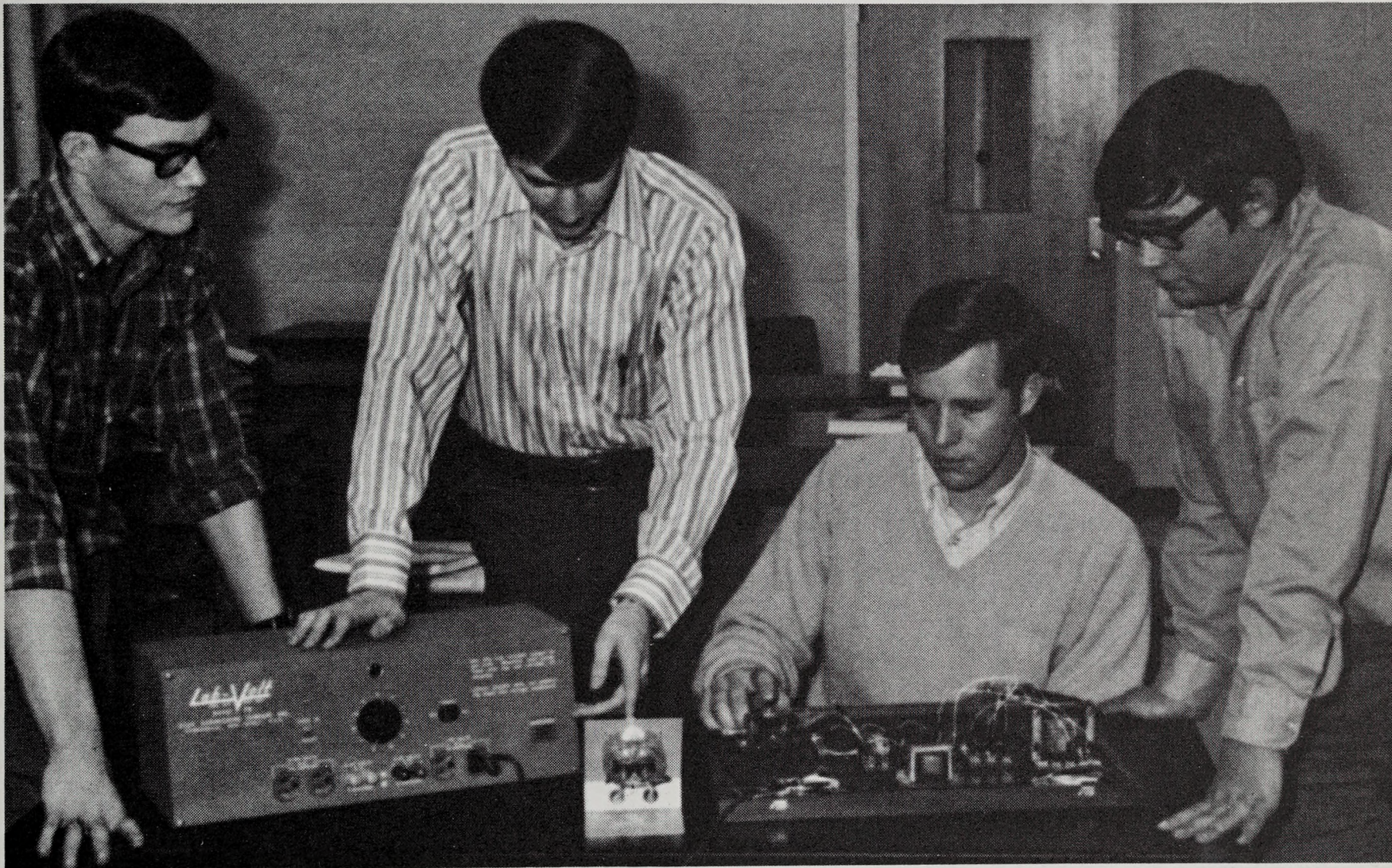
Spring Quarter

English 203
Philosophy 201
Economics 200
Art 217

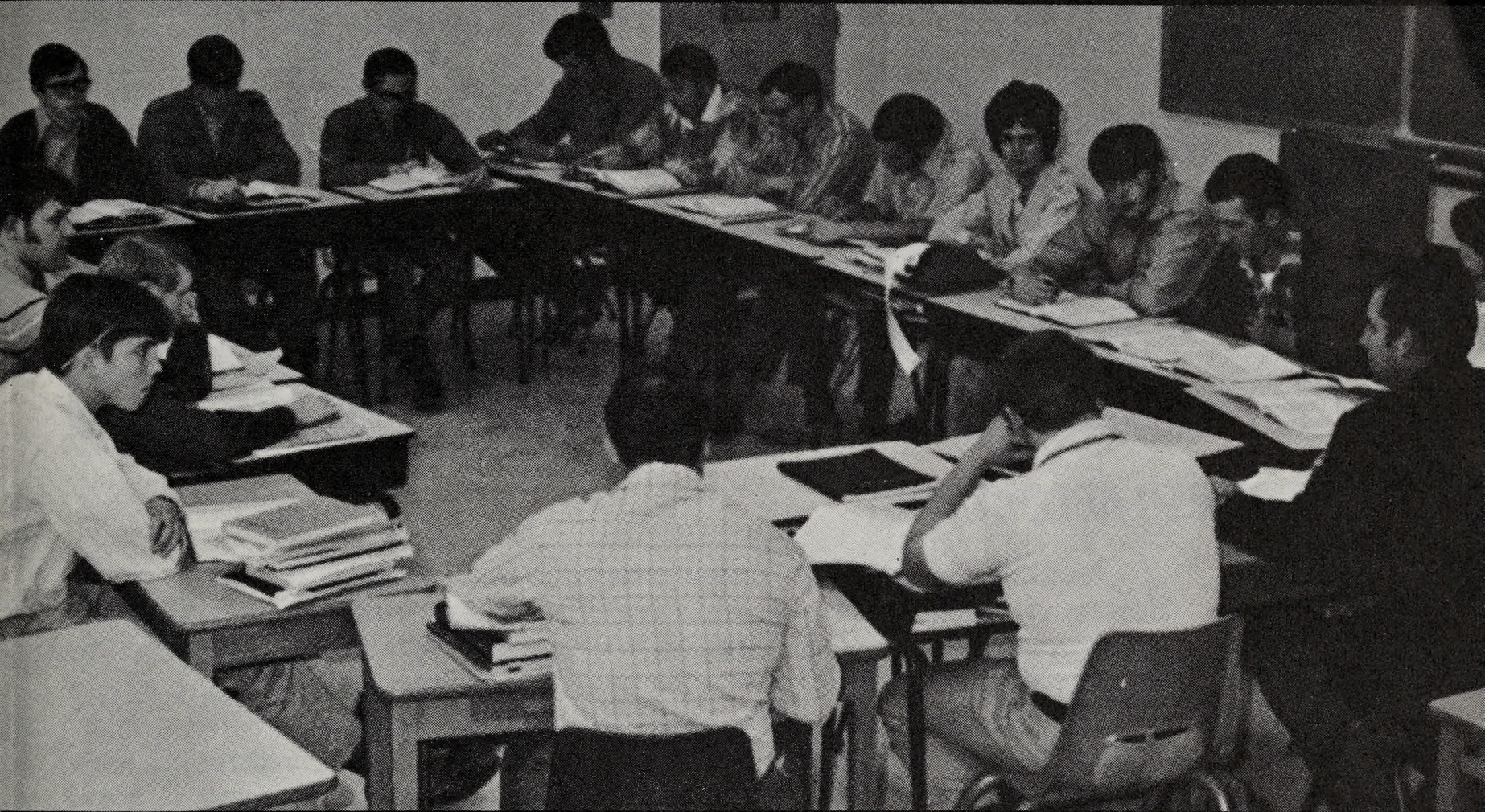
English Literature	3
Ancient Philosophy	3
General Economics	3
Introduction to Art	3

Total	12
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Additional elective courses will be provided in communication arts, humanities, social science and natural science, to make up necessary credits to comply with the General Education Requirements, that have been established by ASU.



TECHNICAL DIVISION CURRICULUMS



Two-Year
Programs
of Study





BUSINESS ACCOUNTING

Accounting is one of the fastest growing employment fields in America today. Because of this tremendous growth, there is an increasing need for trained people in this area. The Accounting Curriculum is designed to offer the necessary accounting theories and skills for entry into the accounting profession.

The duties and responsibilities of an accountant vary somewhat in different firms. Some of these duties are to record transactions, render periodic reports, maintain cost records, complete tax returns, audit books, and advise management in areas of financial affairs.

The graduate of this curriculum may qualify for jobs in business and industry leading to one of the following accounting positions: accounting clerk, payroll clerk, or related occupations.

FIRST QUARTER

	Hours Per Week		
	Class	Lab	Qtr. hrs.
T-ENG 101 GRAMMAR.....	3	0	3
T-BUS 102 Typewriting (or Elective) I.....	2	3*	3
T-MAT 110 Business Math.....	5	0	5
T-BUS 101 Intro. to Business.....	5	0	5
T-ECO 102 Economics I.....	3	0	3
	18	3	19

SECOND QUARTER

T-ENG 102 Composition.....	3	0	3
T-BUS 120 Accounting I.....	5	2	6
T-ECO 104 Economics III.....	3	0	3
T-BUS 115 Business Law I.....	3	0	3
T-BUS 123 Business Finance I.....	3	0	3
	17	2	18

THIRD QUARTER

Hours Per Week			
	Class	Lab	Qtr. hrs.
T-ENG 103 Report Writing.....	3	0	3
T-BUS 124 Business Finance II.....	3	0	3
T-BUS 110 Office Machines I.....	2	2	3
T-BUS 121 Accounting II.....	5	2	6
T-BUS 116 Business Law II	3	0	3
	16	4	18

FOURTH QUARTER

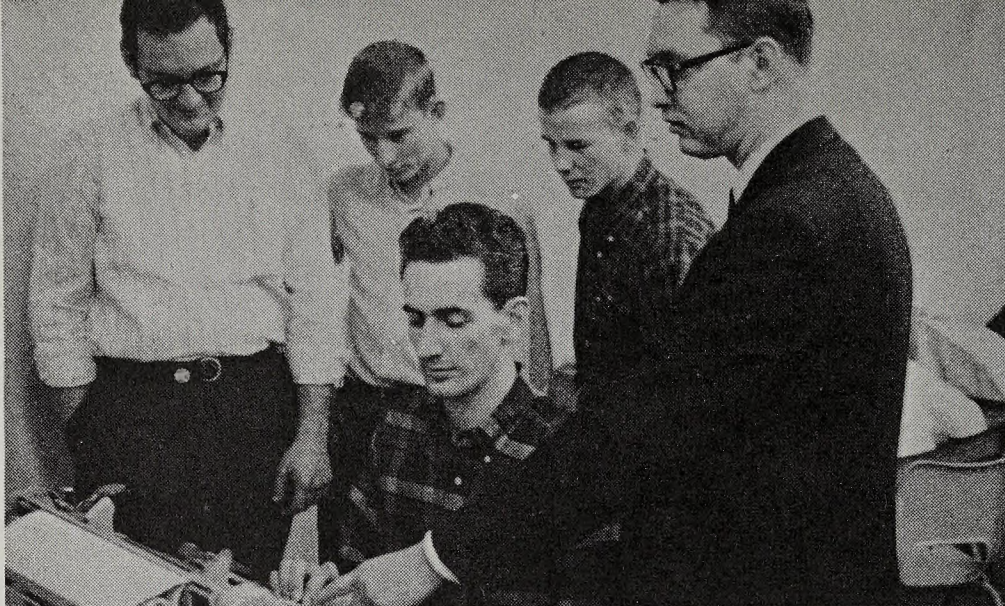
T-ENG 204 Oral Communication.....	3	0	3
T-EDP 104 Intro. Data Processing I	3	2	4
T-BUS 222 Accounting III	5	2	6
Elective	6	0	6
	17	4	19

FIFTH QUARTER

T-ENG 206 Business Communication	3	0	3
T-BUS 223 Accounting IV	5	2	6
T-BUS 225 Cost Accounting.....	3	2	4
T-BUS 235 Business Management.....	3	0	3
Elective	3	0	3
	17	4	19

SIXTH QUARTER

T-BUS 229 Taxes.....	3	2	4
T-BUS 269 Auditing.....	3	2	4
Social Science Elective.....	3	0	3
Elective	4	0	4
	13	4	15



BUSINESS ADMINISTRATION

PURPOSE OF CURRICULUM

With the increasing population and industrial development in this State, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding our economy through study and analysis of the role of production and marketing.
3. Knowledge in specific elements of accounting, finance, and business law.
4. Understanding and skill in effective communication for business.
5. Knowledge of human relations as they apply to successful business operations in a rapidly expanding economy.

JOB DESCRIPTION

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising. Positions are available in businesses such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist and travel industry; insurance; transportation; and communications.

FIRST QUARTER

	Hours Per Week		
	Class	Lab	Qtr. hrs.
T-ENG 101 Grammar.....	3	0	3
T-BUS 102 Typewriting (or Elective).....	2	3	3
T-MAT 110 Business Mathematics	5	0	5
T-BUS 101 Introduction to Business.....	5	0	5
T-ECO 102 Economics.....	3	0	3
	18	3	19



ONE YEAR BUSINESS SECRETARIAL PROGRAM

This curriculum is designed to offer students the necessary secretarial and clerical skills in typing, business machine operation, dictation, transcription, accounting, business math, and personality development for employment in all fields of business.

Graduates of this program may be employed as a stenographer, a secretary, a typist, an accounting clerk, a filing clerk, a receptionist, or a general clerical worker. In addition to taking dictation and transcribing, the secretary may be given additional responsibilities such as meeting office callers or screening telephone calls. Positions may be found in such businesses as insurance companies, hospitals, doctors' offices, law offices, and industrial firms.

FIRST QUARTER

	Hours Per Week		
	Class	Lab	Qtr. hrs.
ENG 101 Grammar	3	0	3
BUS 110 Typewriting	3	4	5
BUS 106 Shorthand	3	4	5
MAT 110 Business Mathematics	5	0	5
	14	8	18

SECOND QUARTER

ENG 102 Composition	3	0	3
BUS 103 Typewriting	3	2	4
BUS 107 Shorthand	3	2	4
BUS 122 Filing	2	2	3
BUS 120 Accounting	5	2	6
	16	8	20

THIRD QUARTER

ENG 103 Report Writing	3	0	3
BUS 104 Typewriting	3	2	4
BUS 108 Shorthand	3	2	4
BUS 110 Office Machines	2	2	3
BUS 121 Accounting	5	2	6
	16	8	20

FOURTH QUARTER

T-ENG 204 Oral Communication	3	0	3
T-BUS 205 Advanced Typewriting	3	2	4
T-BUS 206 Dictation & Transcription	3	2	4
T-BUS 211 Office Machines	2	2	3
T-BUS 214 Secretarial Procedures	3	2	4
T-BUS 215 Correspondence	3	0	3
	17	8	21



TWO YEAR EXECUTIVE SECRETARY PROGRAM

PURPOSE OF CURRICULUM

The demand for better qualified secretaries in our expanding business world is becoming more acute. The purpose of this curriculum is to outline a training program that will provide training in the accepted procedures required by the business world, and to enable persons to become proficient soon after accepting employment in the business office.

The Executive Secretary Curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the business world. The special training in secretarial subjects is supplemental by related courses in mathematics, accounting, business law, and personality development.

JOB DESCRIPTION

The graduate of the Executive Secretary Curriculum should have a knowledge of business terminology, skill in dictation, and accurate transcription of business letters and reports. The graduate may be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls, and being an assistant to an executive. She may enter a secretarial position in a variety of offices in businesses such as insurance companies, banks, marketing institutions, and financial firms.

FIRST QUARTER

	Hours Per Week		
	Class	Lab	Qtr. hrs.
T-ENG 101 Grammar.....	3	0	3
T-BUS 102 Typewriting (Or Elective).....	2	3	3
T-MAT 110 Business Mathematics	5	0	5
T-BUS 101 Introduction to Business	5	0	5
T-BUS 106 Shorthand (Or Elective).....	3	2	4
	18	5	20

SECOND QUARTER

T-ENG 102 Composition	3	0	3
T-BUS 103 Typewriting (Or Elective).....	2	3	3
T-BUS 107 Shorthand.....	3	2	4
T-BUS 120 Accounting.....	5	2	6
T-BUS 115 Business Law	3	0	3
	16	7	19

THIRD QUARTER

Hours Per Week			
	Class	Lab	Qtr. hrs.
T-ENG 103 Report Writing.....	3	0	3
T-BUS 104 Typewriting	2	3	3
T-BUS 108 Shorthand.....	3	2	4
T-BUS 110 Office Machines.....	2	2	3
T-BUS 112 Filing	3	0	3
	13	7	16

FOURTH QUARTER

T-ENG 204 Oral Communication.....	3	0	3
T-BUS 206E Dictation and Transcription (Executive).....	3	2	4
T-BUS 205 Advanced Typewriting	2	3*	3
T-BUS 211 Office Machines.....	2	2	3
T-EDP 104 Introduction to Data Processing Systems.....	3	2	4
	13	9	17

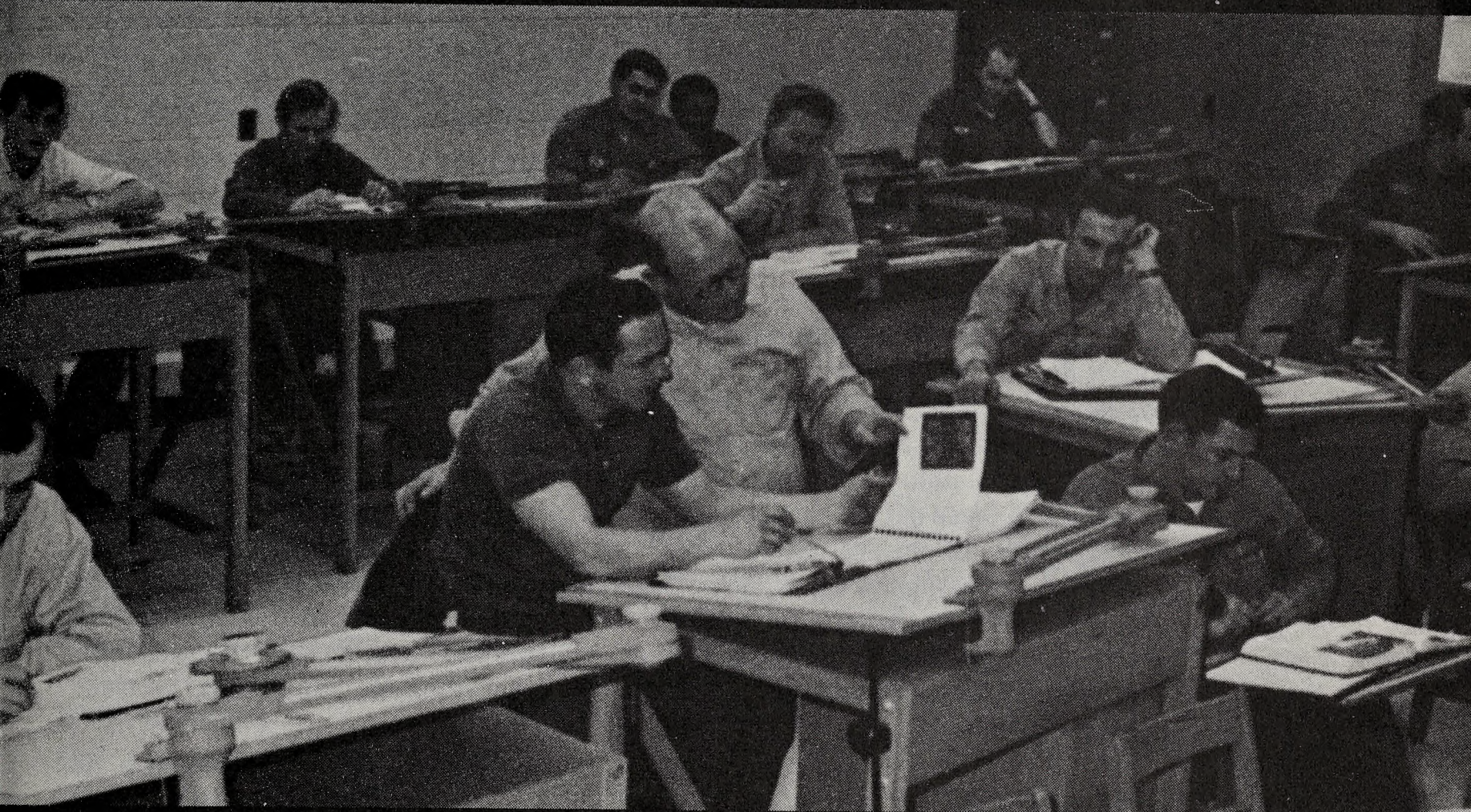
FIFTH QUARTER

T-ENG 206 Business Communication	3	0	3
T-BUS 207E Dictation and Transcription (Executive).....	3	2	4
T-BUS 214 Secretarial Procedures.....	3	2	4
General Business Elective.....	3	0	3
Elective	6	0	6
	18	4	20

SIXTH QUARTER

Social Science Elective	3	0	3
T-BUS 208E Dictation and Transcription (Executive).....	3	2	4
T-BUS 271 Office Management.....	3	0	3
Elective	6	0	6
	15	2	16

VOCATIONAL DIVISION CURRICULUMS



One-Year
Programs of Study



AUTO BODY REPAIR



PURPOSE OF CURRICULUM

The field of automotive body repair and painting needs many more well-trained people to meet the growing demand for the many special skills in this area of employment.

JOB DESCRIPTION

Graduates of the Auto Body Repair Curriculum are qualified for jobs in which they remove dents in automobile bodies and fenders; take off fenders and replace them with new ones; straighten frames, doors, hoods, and deck lids; and align wheels. In their work these craftsmen operate welding equipment. They also make tests on and repair engine cooling systems. Auto body repairmen shrink stretched metal and prepare it for painting. In addition to these duties, auto body repairmen remove, cut, fit, and install glass. They are required to remove and install interior trim; cut, sew, and install headings and seat covers; repair and replace upholstery and fabric tops of vehicles; and rebuild springs and padding. These repairmen also prepare orders for repairs and parts as well as estimates and statements for adjusters. After gaining experience, many of these craftsmen open their own businesses or become body shop foremen, supervisors, or managers.

FIRST QUARTER

	Hours Per Week		
	Class	Lab	Qtr. hrs.
AUT 1111 Auto Body Repair.....	6	15	11
MAT 1101 Shop Mathematics.....	3	0	3
WLD 1101 Basic Gas Welding	0	3	1
	9	18	15

SECOND QUARTER

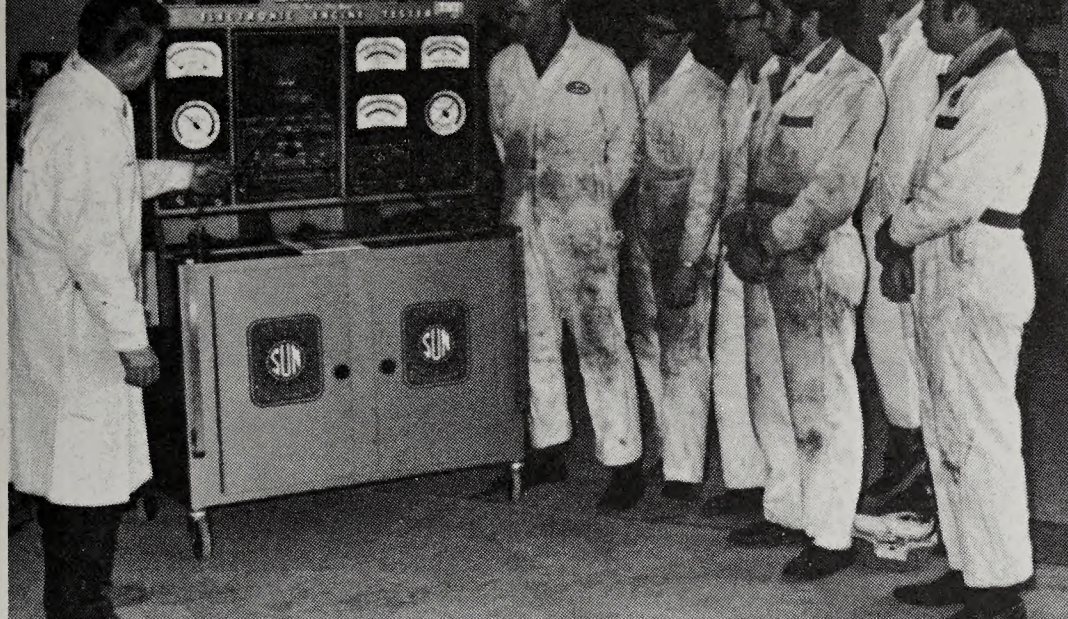
AUT 1112 Auto Body Repair.....	7	12	11
WLD 1105 Auto Body Welding	0	3	1
PHY 1101 Shop Science	3	2	4
	10	17	16

THIRD QUARTER

AUT 1113 Metal Finishing & Painting.....	3	12	7
AUT 1115 Trim, Glass, Radiator Repair.....	2	6	4
ENG 1101 Communication Skills	3	2	4
	8	20	15

FOURTH QUARTER

AUT 1114 Body Shop Applications	3	21	10
BUS 1103 Shop Management	3	0	3
	6	21	13



AUTO MECHANICS

This is a one-year program providing a thorough training in the theoretical as well as manual skills in servicing, testing and diagnosing. All phases of the electrical system, the power plant, braking system, the power train will be studied.

The courses are arranged in a sequence that gives the student the required technological and special courses as they are needed to coordinate his laboratory experiences.

Emphasis is placed on the mechanical parts and operation of the various automobile units. Trouble shooting and servicing of the live project is also stressed.

OCCUPATIONAL OPPORTUNITIES

Auto Mechanics, Truck and Bus Mechanic, Shop Foreman, Maintenance Supervisor, Dealer, Service Manager, Sales Technician, Factory Representative, and Experimental Lab Work are among those occupational opportunities awaiting graduates of the Automotive Mechanic Curriculum.

FIRST QUARTER

	Hours Per Week		
	Class	Lab	Qtr hrs.
PME 1101 Internal Combustion Engines	7	12	11
MAT 1101 Shop Math.....	3	0	3
ENG 1101 Communication Skills	3	2	4
	13	14	18

SECOND QUARTER

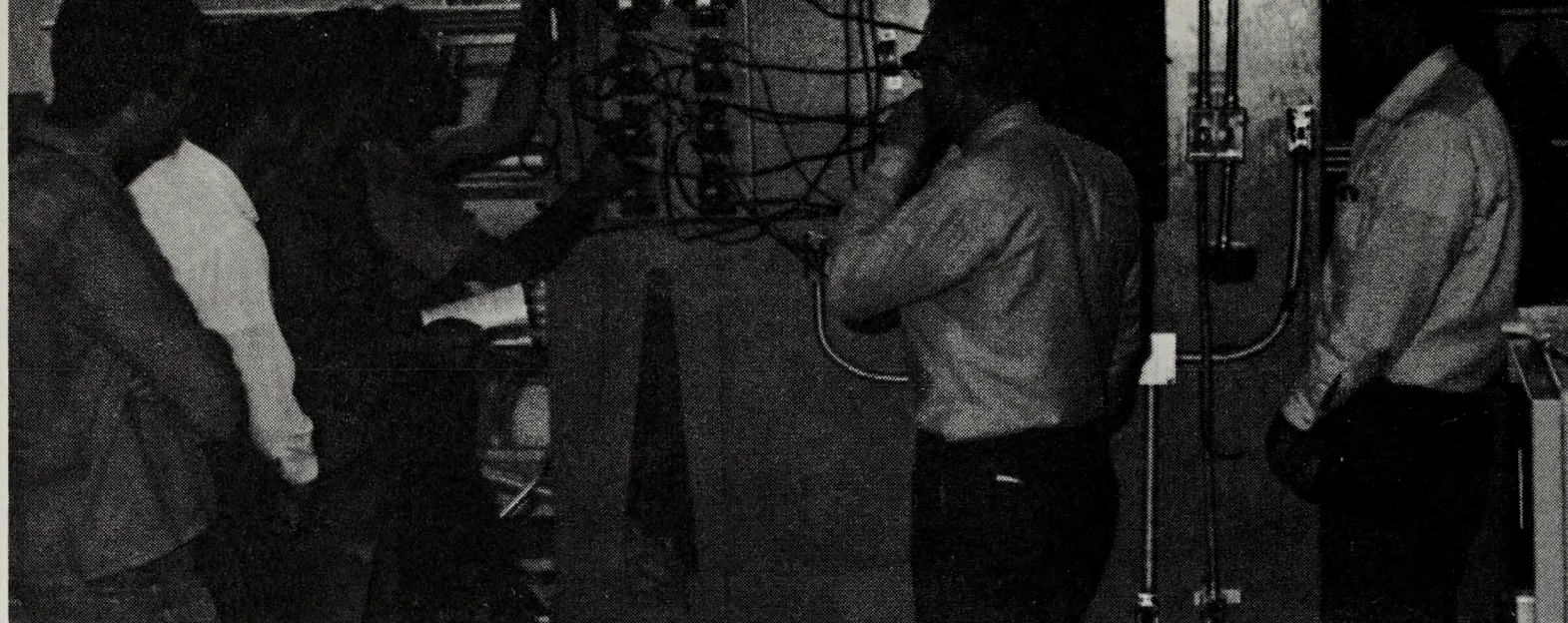
PME 1102 Engine Electrical & Fall Systems	7	12	11
DFT 1101 Schematics & Diagrams: Power Mech.	0	3	1
PHY 1101 Shop Science	3	2	4
	10	17	16

THIRD QUARTER

AUT 1123 Automotive Chassis & Suspension Systems.....	3	9	6
AUT 1121 Automotive Braking Systems	3	6	5
AHR 1101 Automotive Air Conditioning.....	3	3	4
	9	18	15

FOURTH QUARTER

AUT 1124 Automotive Power Train Systems	3	12	7
AUT 1125 Automotive Servicing	3	6	5
BUS 1103 Shop Management	3	0	3
	9	18	15



ELECTRICAL INSTALLATION AND MAINTENANCE

The graduate of the electrical trades program will be qualified to enter an electrical trade as an on-the-job trainee or apprentice, where he will assist in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. He will have an understanding of the fundamentals of the National Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power, and power factor of single and polyphase alternating circuits. He will have a basic knowledge of motor and motor control systems; industrial electronic control systems, business procedures, organization, and practices; communicative skills; and the necessary background to be able to advance through experience and additional training through up-grading courses offered in the School.

FIRST QUARTER

	Hours Per Week		
	Class	Lab	Qtr. hrs.
ELC 1112 Direct & Alternating Current	5	12	9
MAT 1115 Electrical Math	5	0	5
ENG 1101 Communication Skills	3	2	4
	13	14	18

SECOND QUARTER

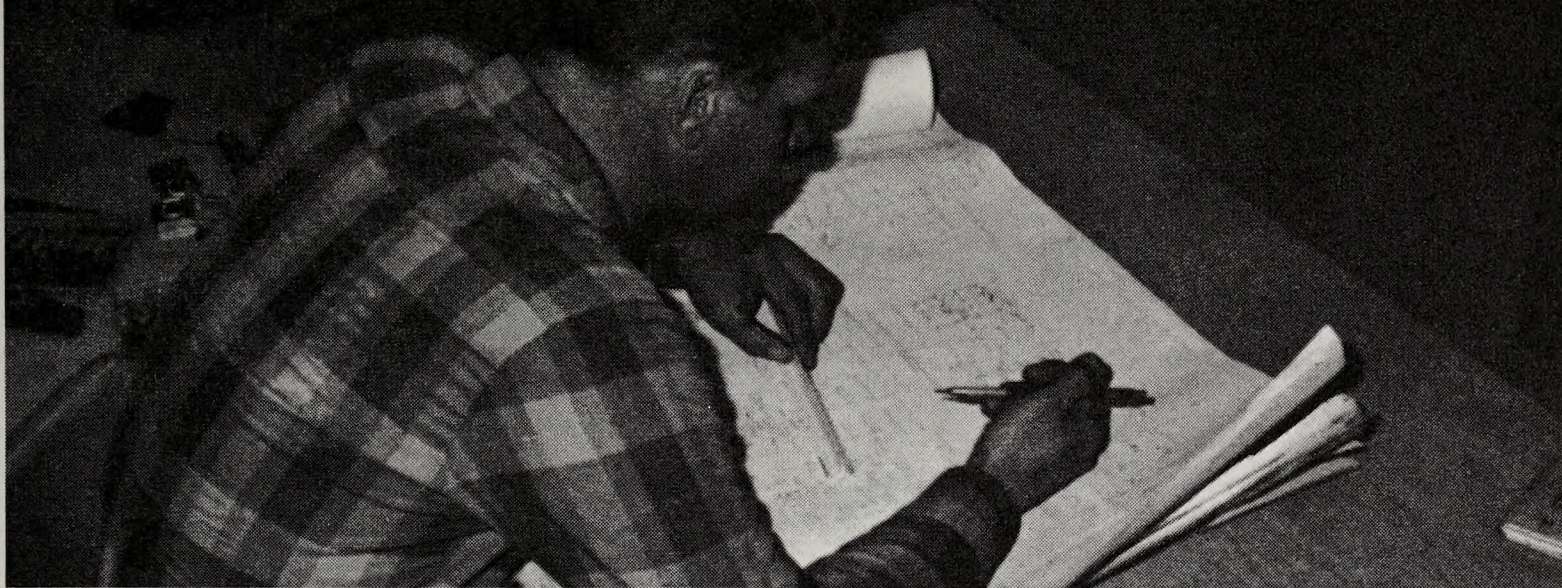
ELC 1113 Alternating Current & Direct Current Machines & Controls	7	12	11
DFT 1110 Blueprint Reading: Building Trades	0	3	1
PHY 1101 Shop Science	3	2	4
	10	17	16

THIRD QUARTER

ELC 1124 Residential Wiring.....	3	9	6
ELN 1118 Industrial Electronics.....	2	6	4
DFT 1113 Blueprint Reading: Electrical	0	3	1
PHY 1102 Shop Science	3	2	4
	8	20	15

FOURTH QUARTER

ELC 1125 Commercial & Industrial Wiring	3	12	7
ELN 1119 Industrial Electronics.....	3	6	5
BUS 1103 Shop Management	3	0	3
	9	18	15



HOSPITAL PLANT MAINTENANCE AND ENGINEERING

The cost of installing mechanical equipment in hospitals throughout the nation represents an enormous investment. In the past, many hospitals were willing to trust such costly installations and their fragile maintenance entirely to untrained persons.

In North Carolina, where 38 percent of the general and special hospitals are situated in communities of fewer than 5,000 population, the growing complexity of hospital equipment poses an increasing maintenance problem. It is simply a fact, that the hospital of the future will have to provide a permanent, round-the-clock maintenance program if it is to provide adequately for all aspects of patient care.

With the problem identified, North Carolina State University, with funds from a United States Public Health Grant and the North Carolina Medical Care Commission, conducted a study entitled Hospital Maintenance Demonstration Project. From this study a strong plea was made for starting a program of continuing education to train new men and update the competence of existing personnel in the design and application of specialized and sensitive equipment.

McDowell Technical Institute is the first institution within the North Carolina Department of Community Colleges to offer this unique curriculum. This program is designed to give the trainee a comprehensive series of courses covering the maintenance of mechanical and electrical equipment, the fundamental theory that governs its performance, and an introduction into the management aspects of the maintenance department.

This curriculum will provide training opportunities in three main subject areas:

1. Electrical Installation and Maintenance
2. Air Conditioning and Refrigeration
3. Plumbing and Heating

This will be a 2 year curriculum with a 3-6 months cooperative work experience program arranged with hospitals in the area. A high school diploma or its equivalent will be required for admission to the program. This requirement will be waived for persons already employed in hospital plant maintenance and engineering fields who enroll to update their training.

HOSPITAL PLANT MAINTENANCE AND ENGINEERING TENTATIVE CURRICULUM

FIRST QUARTER

	Hours Per Week		
	Class	Lab	Qtr. hrs.
ELC 1112 Direct & Alternating Current	5	12	9
MAT 1115 Electrical Math	5	0	5
ENG 1101 Communication Skills	3	2	4
	13	14	18

SECOND QUARTER

Hours Per Week			
	Class	Lab	Qtr. hrs.
ELC 1113 Direct & Alternating Current Machines and Controls	7	12	11
DFT 1110 Blueprint Reading	0	3	1
PHY 1101 Shop Science	3	2	4
	10	17	16

THIRD QUARTER

ELC 1124 Residential Wiring	5	9	8
AHR 1121 Principles of Refrigeration	3	12	7
	8	21	15

FOURTH QUARTER

AHR 1122 Domestic & Commercial Refrigeration	3	9	6
AHR 1123 Principles of Air Conditioning	3	9	6
WLD 1104 Basic Welding & Cutting	1	2	2
	7	20	14

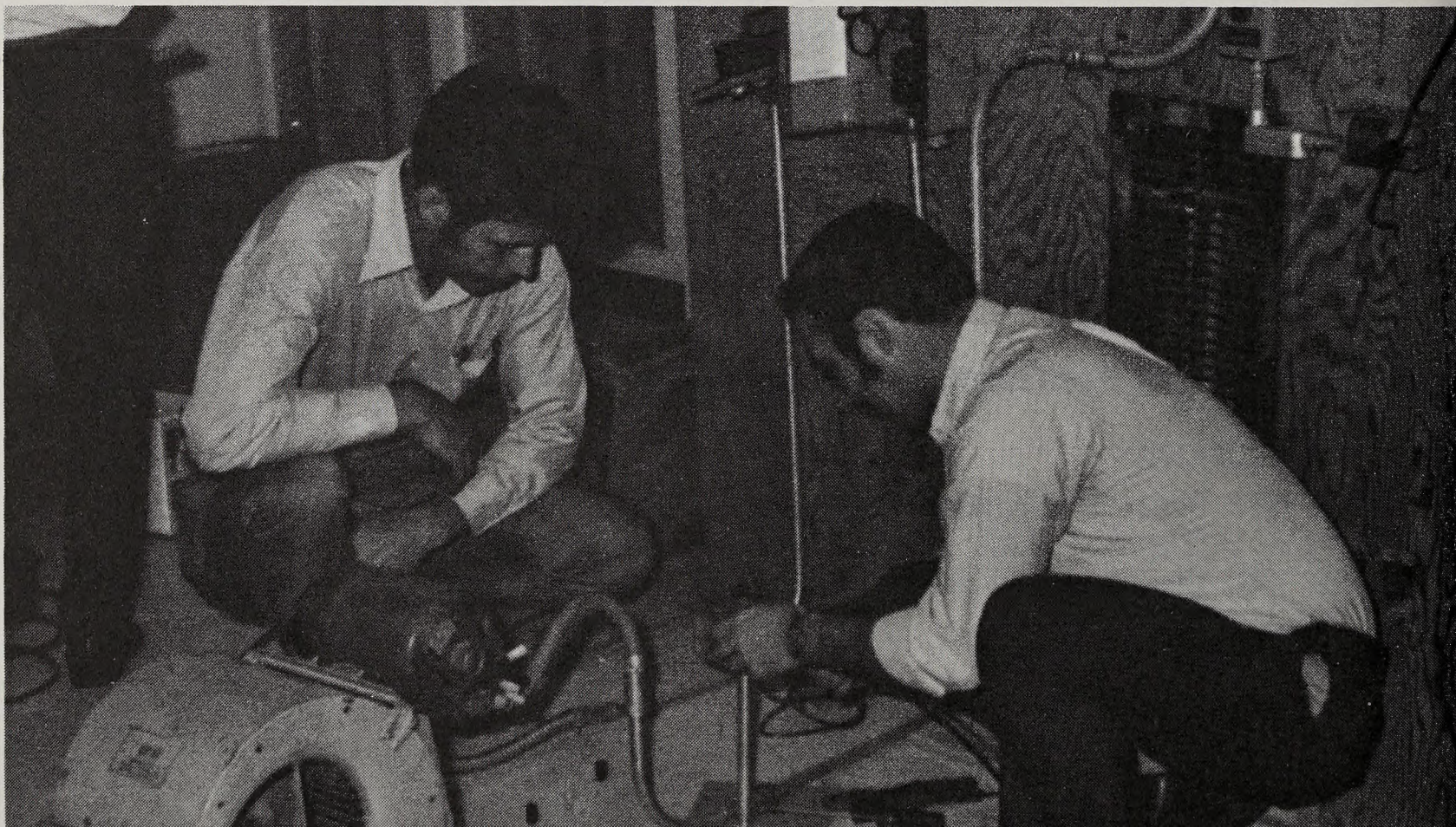
FIFTH QUARTER

AHR 1124 Air Conditioning & Refrigeration Service	3	6	5
AHR 1128 Automatic Controls	3	6	5
PLU 1123 Hot Water & Panel Heating	3	6	5
DFT 1115 Blueprint Reading: Plumbing Trades	0	3	1
	9	21	16

SIXTH QUARTER

PLU 1122 Steam Systems (Low-High Pressure)	3	9	6
PLU 1110 Plumbing Pipework	3	9	6
MEC 1147 Maintenance Recordkeeping	3	0	3
ISC 1101 Industrial Safety	3	0	3
	12	18	18

The cooperative work experience will be arranged individually.





WELDING

PURPOSE OF CURRICULUM

This curriculum was developed to fill the tremendous need for welders in North Carolina. The recently completed Manpower Surveys shows quite clearly that many welders will be needed annually to fill present vacancies in the State.

The content of this curriculum is designed to give students sound understanding of the principles, methods, techniques, and skills essential for successful employment in the welding field and metals industry.

The field of welding offers a person prestige, security, and a future of continuous employment with steady advancement. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipe fitting, production shop, job shop, and many others.

JOB DESCRIPTION

Welders join metals by applying intense heat, and sometimes pressure, to melt the edges to form a permanent bond. Closely related to welding is "oxygen cutting." Of the more than 35 different ways of welding metals, arc, gas, and resistance welding are the three most important.

The principal duty of the welder using manual procedure is to control the melting by directing the heat, from an electric arc or gas welding torch, and to add filler metals where necessary to complete the joint. He should possess a great deal of manipulative skill with a knowledge of jigs, welding symbols, mathematics, basic metallurgy, and blueprint reading.

FIRST QUARTER

	Hours Per Week		
	Class	Lab	Qtr. hrs.
WLD 1141 Beginning Welding.....	6	15	11
MAT 1101 Shop Math.....	3	0	3
DFT 1104 Blueprint Reading: Mechanical.....	0	3	1
	9	18	15

SECOND QUARTER

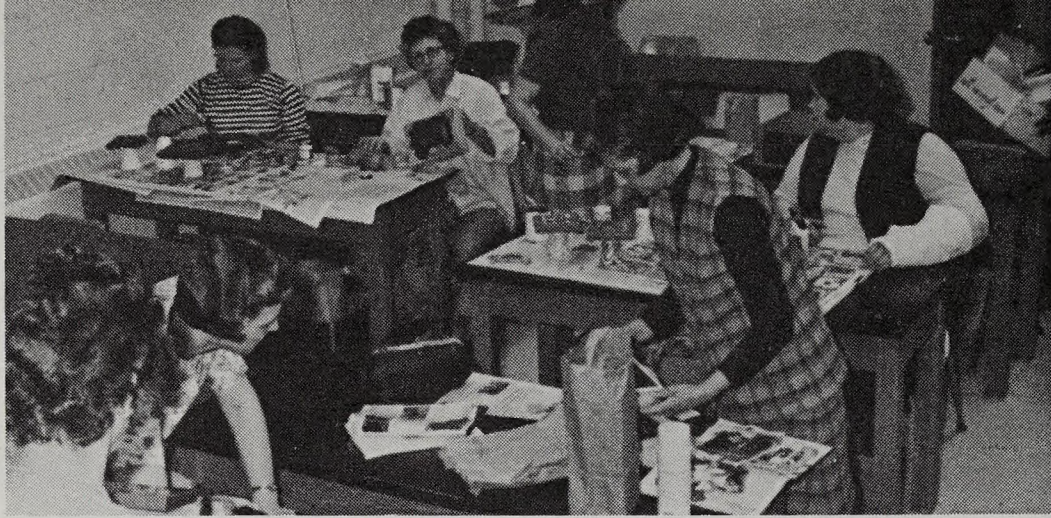
WLD 1142 Intermediate Welding.....	6	15	11
MAT 1102 Shop Math: Geometry.....	3	0	3
DFT 1117 Blueprint Reading: Welding.....	0	3	1
	9	18	15

THIRD QUARTER	Hours Per Week		
	Class	Lab	Qtr. hrs.
WLD 1124 Pipe Welding	3	12	7
WLD 1123 Inert Gas Welding	1	3	2
DFT 1118 Pattern Development & Sketching	0	3	1
ENG 1101 Communication Skills	3	2	4
	7	20	14

FOURTH QUARTER			
WLD 1122 Commercial & Industrial Practices	3	9	6
WLD 1125 Certification Practices	3	6	5
WLD 1112 Mechanical Test & Inspection	1	3	2
BUS 1103 Shop Management	3	0	3
	10	18	16

EXTENSION





EXTENSION DIVISION

McDowell Technical Institute provides training in numerous subjects through its Extension programs. Extension classes are held both at the Institute and at various locations throughout its service area of McDowell, Mitchell, and Yancey Counties. These classes are designed to prepare individuals for employment, or to upgrade workers already employed. General interest and avocational classes are also provided for persons interested in attending.

The extension department also serves area industries and public agencies by providing training for their employees. Training under this division of the Institute can be offered at any time a need for such training is established. Full details can be obtained by contacting the Extension Division or the Extension Director at the Institute.

ADMISSION REQUIREMENTS

Generally speaking any individual who is 18 years of age or whose high school class has graduated is eligible for admission to extension classes; applicants are usually admitted on a first come, first served basis. Some classes may have specific admission requirements, in such cases the Director of Extension will inform applicants of these requirements.

EXPENSES

Many of the extension classes are offered without charge to the students; in other cases a small fee is charged to cover the cost of instructional supplies. The student will be charged for supplies used. Any charges will be paid at the first class meeting.

CERTIFICATES

The Extension Division issues certificates to those who complete a course satisfactorily.

ATTENDANCE

Regular attendance and class participation are essential to effective teaching and learning. Adult students are expected to be regular and punctual in attendance. A minimum of 75 per cent student attendance in each course is required to receive the Achievement Certificate. Classes usually meet once a week depending on the individual class organization.

SELF-IMPROVEMENT AND GENERAL INTEREST COURSES

A broad range of courses is offered in this area, including, but not limited to, the following list. Courses are offered day or night, for short durations, in order to fit the busy adult's schedule. Variations of course offerings are limited only by community interest and available instructors. **Adults should call the Institute to express their areas of interest.** There is no tuition charge for these courses.

Extension Programs which are offered at McDowell Technical Institute include:



Creative Arts

Painting and Drawing
Art Appreciation
Creative Writing

Parent Education

Adolescent Behavior
Child Psychology
Pre-school Problems
Maternity Care
Modern Math for Parents
Drug Abuse

Language Arts

Literature
Creative Writing
Public Speaking
Speedreading
Effective Listening

Hobby Courses

Small Engine Repair
Orientation to the Auto for Women
Volunteer Choir
Ground School for Private Pilots
Boating and Seamanship
Horse Care and Management

Citizenship

North Carolina History
American History
The Constitution

Family Life

Mental Hygiene
Community-Family Relations

Homemaking

Sewing
Tailoring
Interior Decorating
Nutrition
Landscaping and Gardening

Foreign Languages

Conversational French
Conversational Spanish

Consumer Education

Family Finance
Law for the Layman
Consumer Problems
Personal Investments

OCCUPATIONAL EXTENSION

Extension courses are job-related part-time studies to increase skills of employees.

Special extension areas are state-wide in nature. These courses can be taken through many of the Community College Systems' institutions throughout the state, each issuing cumulative credits toward extension diplomas.

Fire Service Training

Designed for full-time and volunteer firemen including courses such as:

Arson	Forcible Entry
Fire Brigade	Extinguisher Practices
Salvage Operation	Rope Practices
Protective Equipment	Home Fire Safety
First Aid and Rescue	Area Fire Schools

Hospitality Training

Designed for the hotel-motel and food service industry including such courses as:

Waitress Training	Promotion
Housekeeping	Service Station Retailing
Management	Food Preparation
Communication	School Food Service

Law Enforcement

Designed for law enforcement officers including such courses as:

Introduction to Police Science	Motor Vehicle Law
Courts and Law	Liquor Law
Elements of Arrest	Administration
Search and Seizure	Human and Public Relations
Evidence	Riot Control
Investigation	Chemical Tests for Alcohol

Supervisory Development Training

Designed for the supervisory or pre-supervisory level including courses in:

Principles of Supervision	Effective Communications
Human Relations	Effective Writing
Act of Motivating People	Effective Speaking
Economics in Business and Industry	Reading Improvement
Job Methods	Work Measurement
Conference Leadership	Industrial First Aid
Job Instruction Training	The Supervisor in North Carolina
Creative Thinking	The Supervisor and Employee Benefits
Industrial Safety and	Job Analysis Training
Accident Prevention	Cost Accounting for Supervisors

A diploma in Supervisory Development Training is offered by the Department of Community Colleges in cooperation with McDowell Technical Institute. Supervisors may qualify for a SDT Diploma by completing nine required supervisory courses totaling 174 clock hours of instruction.

Extension courses are also developed to meet local needs as they arise.

Courses are offered day or night, for various durations, to meet the working adult's schedule. The following courses represent examples of possible offerings:



Vocational

Basic Electricity
Slide Rule
Blueprint Reading
Home Appliance Repair
Bricklaying
Farm Electrification
Power Sewing
Tractor Repair
Nurses Aide
Child Care
Small Engine Repair

Technical

Electronics
Computer Operation
Chemistry
Fabric Design
Precision Measurements

Professional

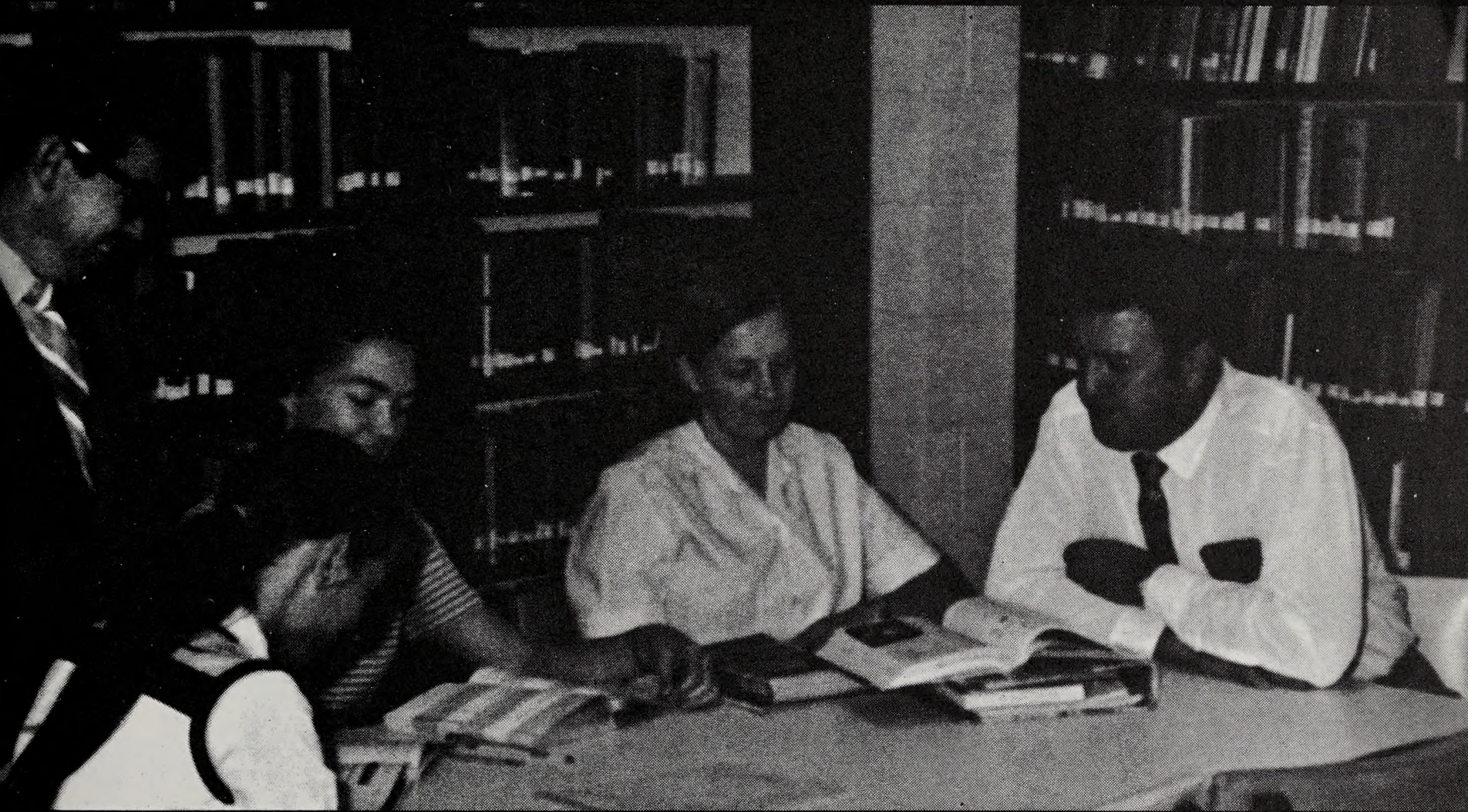
Review for Licensed
Professional Engineers
Refresher for Registered Nurses
Fundamentals of Real Estate
Methods of Teaching Vocational
Subjects
Graduate Courses in Education
(In cooperation with graduate schools)
Advanced Pharmacology for Licensed
Practical Nurses

Other special programs may be offered to meet the training requirements of a special industry or business.

Instructors are selected from men who are academically qualified and who have demonstrated successful work experience in the subjects area to be taught. Frequent use of case studies, audio-visual aids, and class participation insure a high degree of student interest.

Classes are held both day and night in the modern Technical Institute building or at the site of employment.

ADULT EDUCATION



ADULT EDUCATION

PURPOSE

Adult Education is a program designed with but one major purpose—that is to assist adults who wish to improve their skills in oral and written communication, arithmetic, basic science, and social studies. Classes meet two nights weekly in the local communities where there is a sufficient number of interested adults.

EXPENSES

There is no registration fee required and materials are provided by the Adult Division of the Institute. All materials used have been especially prepared for adults with emphasis on individual needs and interests.

CLASSIFICATIONS

Group I: The basic fundamentals of reading, writing, and arithmetic are stressed in Group I. The course is designed to bring adults to a functional level whereby individual study is possible. Some basic science and social studies are introduced at this level.

Group II: Group II is a continuation of the first level with more individual study and a greater scope of subject matter including science and social studies. With the completion of Group II, the adult should be equipped to go into the Adult High School program.

TESTING

A placement inventory may be administered to start the student at the desired grade level in all subject areas.

For additional information about the existing programs or new classes for Adult Basic Education, students may contact the Director of Adult Education at McDowell Technical Institute.

INDUSTRIAL SERVICES



INDUSTRIAL SERVICES

One of the basic objectives of McDowell Technical Institute is to stimulate the creation of more challenging and rewarding jobs for the people of our area by providing a customized training service to new and expanding industries. Subject to only minimal limitations, this institution in cooperation with the Industrial Services Division of the State Department of Community Colleges, will design and administer a special program for training the production manpower required by any new or expanding industry creating new job opportunities in North Carolina.

This program includes the following services:

1. Consultation in determining job description; defining areas of training; and in prescribing appropriate course outlines, training schedules, and materials.
2. Selecting and training of instructors. These instructors may be recruited from the company and from outside sources.
3. Payment of instructors' wages for the duration of the training program.
4. Provision of suitable space for a temporary training facility prior to the completion of the new plant, should such temporary space be required. This may be space with McDowell Technical Institute or leased space in the community.
5. Assumption of installation costs of equipment in the temporary training facility.
6. Payment for one-half the cost of nonsalvageable materials expended on the training program.

The purpose of this service is to help a new or expanding industry meet its immediate manpower needs and to encourage each industry to develop a long-range training program of its own to satisfy its continuing replacement and retraining needs.

For further details of this service, please contact the President, McDowell Technical Institute or the Director, Industrial Services Division, North Carolina Department of Community Colleges, Raleigh, North Carolina.

COURSE DESCRIPTIONS



COLLEGE COURSES

ANTHROPOLOGY 210 GENERAL ANTHROPOLOGY

3 credits

An introduction to the field of anthropology; a study of the major racial groups and their characteristics; archaeological evidence of cultural evolution and growth.

ART 217 INTRODUCTION TO ART

3 credits

Analysis of selected examples of architecture, sculpture, painting, crafts and industrial design in relation to their historical time and need.

ECONOMICS 200 GENERAL ECONOMICS

3 credits

A survey course of elementary economics designed for non-business and non-social studies majors who plan to take only one course in this field. A brief treatment of the production and distribution of wealth in society, money and banking, the organization of business, and international trade.

ENGLISH 101-102-103 GRAMMAR AND COMPOSITION

(3-3-3) credits

A study of grammar, sentence structure, principals of composition, vocabulary building; written compositions; introduction to literature.

GEOGRAPHY 101 PHYSICAL GEOGRAPHY

4 credits

The earth's astronomical relations, factors of weather and climate, and physiographic features.

GEOGRAPHY 102 WORLD REGIONS

5 credits

Relation of human activities to the larger geographic regions of the world.

HISTORY 101-2-3 WORLD CIVILIZATIONS

(3-3-3) credits

A survey of world history; ancient and medieval; early modern; nineteenth and twentieth centuries after 1848.

MATHEMATICS 101 INTRODUCTION TO MATHEMATICS

5 credits

A study of the logical structure of mathematics including such topics as elementary set theory and logic, number systems, and algebraic processes.

MUSIC 217 INTRODUCTION TO MUSIC

3 credits

A non-technical course designed for students with little or no musical background. Emphasis is placed upon listening to music and finding pleasure in it.

PHILOSOPHY 201 ANCIENT PHILOSOPHY

3 credits

An introduction to philosophy through the study of the pre-socratic philosophers and of Plato and Aristotle.

PHYSICAL SCIENCE 101-102-103 MAN AND HIS ENVIRONMENT

(3-3-3) credits

An intergrated perspective of the physical sciences, study of selected topics such as systems of measurement, the expanding universe, structure of the earth, kinetic molecular theory of matter; energy (types, transformations, utilization) properties of elements and compounds, structure and utilization of atoms. The role of science in the development of civilization.

POLITICAL SCIENCE 201 AMERICAN NATIONAL GOVERNMENT

3 credits

A study of the policies, functions, and programs of the national government, its organization, functions and powers.

PSYCHOLOGY 201 GENERAL PSYCHOLOGY

3 credits

Emphasizes psychology as a science of human behavior; man as a biological organism in a social world; man as a motivated person with attitudes, emotions, needs, desires; man as a thinking, imagining, reasoning, learning person. Attempts to relate to his biological, physical, cultural, and personal worlds.

RELIGION 201 INTRODUCTION TO THE OLD TESTAMENT

3 credits

An examination of the history, literature, and faith of the Old Testament.

SOCIOLOGY 201 GENERAL SOCIOLOGY

3 credits

An introduction to the field of sociology. How society and its component parts are structured; analysis of the structure and function of social institutions and groups; relationships of the individual to society.

SOCIOLOGY 202 SOCIAL PROBLEMS

3 credits

A study of social problems in our society.

SPEECH 101 FUNDAMENTALS OF SPEECH

3 credits

Introduction to the theory and practice of public address with emphasis on standard pronunciation, distinct articulation and the proper use of the voice in speaking.

BUSINESS TECHNOLOGY COURSES

T-BUS 101 INTRODUCTION TO BUSINESS. A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. Prerequisite: None.

T-BUS 102 TYPEWRITING I. Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

T-BUS 103 TYPEWRITING II. Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Prerequisite: T-BUS 102 or the equivalent. Speed requirement: 30 words per minute for five minutes.

T-BUS 104 TYPEWRITING III. Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Prerequisite: T-BUS 103 or the equivalent. Speed requirements: 40 words per minute for five minutes.

T-BUS 106 SHORTHAND I. A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases. Prerequisite: None.

T-BUS 107 SHORTHAND II. Continued study of theory with greater emphasis on dictation and elementary transcription. For successful completion student should have grade of "C" in T-BUS 106. Prerequisite: Completion of, or enrollment in, T-ENG 101, T-BUS 106.

T-BUS 108 SHORTHAND III. Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. For successful completion student should have grade of "C" in T-BUS 107. Prerequisite: T-BUS 107.

T-BUS 110 OFFICE MACHINES I. A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator. Prerequisite: None.

T-BUS 112 FILING. Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal filing. Prerequisite: None.

T-BUS 115 BUSINESS LAW I. A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies. Prerequisite: None.

T-BUS 116 BUSINESS LAW II. Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights. Prerequisite: T-BUS 115.

T-BUS 120 ACCOUNTING I. Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: T-MAT 110.

T-BUS 121 ACCOUNTING II. Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: T-BUS 120. ("C" in T-BUS 120 needed for successful completion of T-BUS 121).

T-BUS 123 BUSINESS FINANCE I. Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing. Prerequisite: T-BUS 120 or T-BUS 120 to be taken concurrently with T-BUS 123.

T-BUS 124 BUSINESS FINANCE II. Financing, federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies. Prerequisite: T-BUS 123.

T-BUS 205 ADVANCED TYPEWRITING IV. Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents. Speed requirement: 50 words per minute for five minutes. Prerequisite: T-BUS 104.

T-BUS 206E DICTATION AND TRANSCRIPTION I. Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material. Prerequisite: T-BUS 110.

T-BUS 211 OFFICE MACHINES II. Instructions in the operation of the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines. Prerequisite: T-BUS 110.

T-BUS 214 SECRETARIAL PROCEDURES. Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel infor-

mation, telegrams, office records, purchasing of supplies, office organization, and insurance claims. Prerequisite: None.

T-BUS 215 OFFICE CORRESPONDENCE. The principles of business letter writing with special emphasis on the application of modern practices in all types of office correspondence.

T-BUS 222 ACCOUNTING III. Thorough treatment of the field of general accounting, providing the necessary foundation for specialized studies that follow. The course includes, among other aspects, the balance sheet, income and surplus statements, fundamental processes of recording, cash and temporary investments, and analysis of working capital. Prerequisite: T-BUS 121.

T-BUS 223 ACCOUNTING IV. Additional study of intermediate accounting with emphasis on investments, plant and equipment, intangible assets and deferred charges, long-term liabilities, paid-in capital, retained earnings, and special analytical processes. Prerequisite: T-BUS 222.

T-BUS 225 COST ACCOUNTING. Nature and purposes of cost accounting; accounting for direct labor, materials, and factory burden; job cost, and standard cost principles and procedures; selling and distribution cost; budgets, and executive use of cost figures. Prerequisite: T-BUS 121.

T-BUS 229 TAXES. Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance. Prerequisite: T-BUS 121.

T-BUS 232 SALES DEVELOPMENT. A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required. Prerequisite: None.

T-BUS 235 BUSINESS MANAGEMENT. Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business — qualifications and requirements. Prerequisite: None.

T-BUS 239 MARKETING. A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in the marketing process. Prerequisite: None.

T-BUS 243 ADVERTISING. The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media. Prerequisite: None.

T-BUS 269 AUDITING. Principles of conducting audits and investigations; setting up accounts based upon audits; collecting data on working papers; arranging and systemizing the audit, and writing the audit report. Emphasis placed on detailed audits, internal auditing, and internal control. Prerequisite: T-BUS 223.

T-BUS 271 OFFICE MANAGEMENT. Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems. Prerequisite: None.

T-BUS 272 PRINCIPLES OF SUPERVISION. Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associate.

BUSINESS ELECTIVE COURSES

T-BUS 245 RETAILING. A study of the role of retailing in the economy including development of present retail structure, functions performed, principles governing effective operation and managerial problems resulting from current economic and social trends. Prerequisite: None.

T-BUS 247 BUSINESS INSURANCE. A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included. Prerequisite: None.

T-BUS 255 INTERPRETING ACCOUNTING RECORDS. Designed to aid the student in developing a "use understanding" of accounting records, reports and financial statements. Interpretation, analysis, and utilization of accounting statements. Prerequisite: T-BUS 121.

T-BUS 266 BUDGET AND RECORD KEEPING. The basic principles, methods, and procedures for preparation and operation of budgets. Special attention is given to the involvement of individual departments and the role they play. Emphasis on the necessity for accurate record keeping in order to evaluate the effectiveness of budget planning. Prerequisite: T-BUS 121.

T-BUS 233 PERSONNEL MANAGEMENT. Principles of organization and management of personnel, procurement, placement, training, performance checking, supervision, remuneration, labor relations, fringe benefits and security. Prerequisite: None.

T-BUS 237 WHOLESALING. The development of wholesaling; present day trends in the United States. A study of the functions of wholesaling. Prerequisite: None.

T-ECO 102 ECONOMICS. The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large. Prerequisite: None.

T-ECO 104 ECONOMICS. Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems. Prerequisite: T-ECO 102.

T-EDP 104 INTRODUCTION TO DATA PROCESSING SYSTEMS. Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses. Prerequisite: None.

T-ENG 101 GRAMMAR. Review of grammar. Emphasis is on studying one part of speech at the time, isolating it in the sentence, and identifying problems connected with it. Vocabulary building and spelling. Prerequisite: None.

T-ENG 102 GRAMMAR AND COMPOSITION. Continuation of T-ENG 101. Emphasis ultimately shifts from individual grammatical units of the sentence to the whole sentence

and to the analysis and composition of coherent, unified paragraphs. Prerequisite: T-ENG 101.

T-ENG 103 REPORT WRITING. Covers organization of and techniques of modern business reports. Emphasis is upon research techniques, rhetorical devices, accurate, concise word usage, development of effective sentences and paragraphs, and employment of standard report form. Full-length report is required by the end of the term. Prerequisite: T-ENG 102.

T-ENG 204 ORAL COMMUNICATION. A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: T-ENG 101.

T-ENG 206 BUSINESS COMMUNICATION. Develops skills in techniques in writing business communications. Emphasis is placed on writing action—getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry. Prerequisite: T-ENG 102.

T-MAT 110 BUSINESS MATHEMATICS. This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount commission, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: None.

T-PSY 101 HUMAN RELATIONS. A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation. Prerequisite: None.

T-PSY 206 APPLIED PSYCHOLOGY. A study of the principles of psychology that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings and emotions are considered with particular reference to on-the-job problems. Other topics investigated are: employee selection, supervision, job satisfaction, and industrial conflicts. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his adjustment problems as a worker and a member of the general community. Prerequisite: None.

VOCATIONAL COURSES

AHR 1101 AUTOMOTIVE AIR-CONDITIONING. General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system. Prerequisites: PHY 1101, DFT 1110, PME 1102.

AHR 1121 PRINCIPLES OF REFRIGERATION. An introduction to the principles of refrigeration, terminology, the use and care of tools and equipment, and the identification and the function of the component parts of a system. Other topics to be included will be the basic laws of refrigeration; characteristics and comparison of the various refrigerants; the use and construction of valves, fittings, and basic controls. Practical work includes tube bending, flaring and soldering. Standard procedures and safety measures are stressed in the use of special refrigeration service equipment and the handling of refrigerants. Prerequisite: None.

AHR 1122 DOMESTIC AND COMMERCIAL REFRIGERATION. Domestic refrigeration servicing of conventional, hermetic, and absorption systems. Cabinet care, controls, and system maintenance in domestic refrigerators, freezers, and window air conditioning units is stressed. Commercial refrigeration servicing of display cabinets, walk-in cooler and freezer units, and mobile refrigeration systems is studied. The use of manufacturers' catalogs in sizing and matching system components and a study of controls, refrigerants, servicing methods is made. The American Standard Safety Code for Refrigeration is studied and its principles practiced. Prerequisite: AHR 1121.

AHR 1123 PRINCIPLES OF AIR CONDITIONING. Work includes the selection of various heating, cooling and ventilating systems, investigation and control of factors affecting air cleaning, movement, temperature, and humidity. Use is made of psychrometric charts in determining needs to produce optimum temperature and humidity control. Commercial air conditioning equipment is assembled and tested. Practical sizing and balancing of ductwork is performed as needed. Prerequisite: AHR 1122.

AHR 1124 AIR CONDITIONING AND REFRIGERATION SERVICING. Emphasis is placed on the installation, maintenance, and servicing of equipment used in the cleaning, changing, humidification and temperature control of air in an air conditioned space. Installation of various ducts and lines needed to connect various components is made. Shop work involves burner operation, controls, testing and adjusting of air conditioning and refrigeration equipment, and location and correction of equipment failure. Prerequisite: AHR 1123.

AHR 1128 AUTOMATIC CONTROLS. Types of automatic controls and their function in air conditioning systems. Included in the course will be electric and pneumatic controls for domestic and commercial cooling and heating; zone controls, unit heater and ventilator controls, commercial fan systems controls, commercial refrigeration controls, and radiant panel controls. Prerequisites: AHR 1122.

AUT 1111 AUTO BODY REPAIR. Basic principles of automobile construction, design, and manufacturing. A thorough study of angles, crown, and forming of steel into the complex contour of the present day vehicles. The student applies the basic principles of straightening, aligning, and painting of damaged areas. Prerequisite: None.

AUT 1112 AUTO BODY REPAIR. A thorough study of the requirements for a metal worker, including the use of essential tools, forming fender flanges and beads, and straightening typical auto body damage. The student begins acquiring skills such as shaping angles, crowns, and contour of the metal of the body and fenders. Metal working and painting. Prerequisites: AUT 1111, WLD 1101, PHY 1101, MAT, 1101.

AUT 1113 METAL FINISHING AND PAINTING. Development of the skill to shrink stretched metal, soldering and leading, and preparation of the metal for painting. Straightening of doors, hoods, and deck lids; fitting and aligning. Painting fenders and panels, spot repairs, and complete vehicle painting; the use and application of power tools. Prerequisites: AUT 1112, WLD 1105.

AUT 1114 BODY SHOP APPLICATIONS. General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control, and the safety of the vehicle. Unit job application covers straightening of frames and front wheel alignment. The student applies all phases of training. Repair order writing, parts purchasing, estimates of damage, and developing the final settlement with the adjuster. Prerequisites: AUT 1115.

AUT 1115 TRIM, GLASS AND RADIATOR REPAIR. Methods of removing and installing interior trim; cutting, sewing and installing headlinings, seat covers, and door trim panels; painting of trim parts and accessories. Glass removal, cutting, fitting, and

installation. The student gains a thorough knowledge of the engine cooling system and repairs and replaces damaged cooling system components. Tests are made to insure normal engine cooling operation. Prerequisites: AUT 1112, WLD 1105.

AUT 1121 BRAKING SYSTEMS. A complete study of various braking systems employed on automobiles and lightweight trucks. Emphasis is placed on how they operate, proper adjustment, and repair. Prerequisite: None.

AUT 1123 AUTOMOTIVE CHASSIS AND SUSPENSION SYSTEMS. Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension, and steering systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, and front end alignment. Prerequisite: PME 1102.

AUT 1124 AUTOMOTIVE POWER TRAIN SYSTEMS. Principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair. Prerequisites: PHY 1102, AUT 1123, DFT 1101.

AUT 1125 AUTOMOTIVE SERVICING. Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems, providing a full range of experiences in testing, adjusting, repairing and replacing. Prerequisites: AUT 1123, AUT 1121, AHR 1101.

BUS 1103 SHOP MANAGEMENT. Management procedures are developed to familiarize the prospective businessman with the many important functions that must be carried on in the operation of a small business or enterprise. An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations are some of the subjects studied.

DFT 1101 SCHEMATICS AND DIAGRAMS: POWER MECHANICS. Interpretation and reading of schematics and diagrams. Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes. Prerequisite: None.

DFT 1104 BLUEPRINT READING: MECHANICAL. Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures and notes. Prerequisite: None.

DFT 1110 BLUEPRINT READING: BUILDING TRADES. Principles of interpreting blueprints and trade specifications common to the building trades. Development of proficiency in making three view and pictorial sketches. Prerequisite: None.

DFT 1113 BLUEPRINT READING: Electrical. Interpretation of schematics, diagrams and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes will be a part of this course. Prerequisite: DFT 1110.

DFT 1115 BLUEPRINT READING: Plumbing Trades. Sketching diagrams and schematics, and interpretation of blueprints applicable to the plumbing trades. Emphasis will be on plumbing plans for domestic and commercial buildings. Piping symbols, schematics, diagrams, and notes will be studied in detail. Applicable building and plumbing codes will be used for reference. Prerequisite: DFT 1110.

DFT 1117 BLUEPRINT READING: Welding. A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications. Prerequisite: DFT 1104.

DFT 1118 PATTERN DEVELOPMENT AND SKETCHING. Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates. Prerequisite: None.

ELC 1112 DIRECT AND ALTERNATING CURRENT. A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. An analysis of direct current circuits by Ohm's Law and Kirchhoff's Laws. A study of the sources of direct current, voltage potentials. Fundamental concepts of alternating current, flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating current circuits. Prerequisite: MAT 1115.

ELC 1113 ALTERNATING CURRENT AND DIRECT CURRENT MACHINES AND CONTROLS. Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple system controls. Prerequisite: ELC 1112.

ELC 1124 RESIDENTIAL WIRING. Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as: services, switchboards, lighting, fusing wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups. Prerequisite: None.

ELC 1125 COMMERCIAL AND INDUSTRIAL WIRING. Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems. Prerequisites: ELC 1124, ELC 1113.

ELN 1118 INDUSTRIAL ELECTRONICS. Basic theory, operating characteristics, and application of vacuum tubes such as diodes, triodes, tetrodes, pentodes, and gaseous control tubes. An introduction to amplifiers using triodes, power supplies using diodes, and other basic applications. Prerequisite: ELC 1112.

ELN 1119 INDUSTRIAL ELECTRONICS. Basic industrial electronic systems such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyatron tubes, and other basic types of systems commonly found in most industries. Prerequisite: ELN 1118.

ENG 1101 COMMUNICATION SKILLS. The course deals with the development of an ability to communicate effectively through the medium of good language usage in speaking and writing. Emphasis is placed upon the efficient organization and presentation of thoughts related to job-connected problems.

IDS 1000 INDIVIDUAL STUDY. This offering is made available each quarter to provide students with the opportunity to develop greater skill in their major area of study. Each student will work under the supervision of the head of the major department in which he is enrolled. Approval by the instructor and the Director of Occupational Education is required before a student may register for this class.

ISC 1101 INDUSTRIAL SAFETY. A study of the development of Industrial Safety; accident occurrence and prevention; analysis of accident causes and costs; basic factors of accident control; safety education and training; accident reporting and records; employer and employee responsibility; safety organizations; first aid; mechanical safeguards; personal protective equipment use; materials handling; fire prevention and protection; safety codes; and accident statistics.

MAT 1101 SHOP MATHEMATICS I. A review and application of operations with decimals and fractions, ratios and proportions. An introduction to algebra with emphasis on formulas.

MAT 1102 SHOP MATHEMATICS II. The emphasis is placed on theorems in geometry. About 40 general theorems are demonstrated by the instructor. Specific application of each theorem to the solution of geometric shop problems is demonstrated. Concepts of linear measure, areas, and volumes are taught. Geometric formulas are derived intuitively. Prerequisite: MAT 1101.

MAT 1115 ELECTRICAL MATH. A study of fundamental concepts of algebra; basic operations of addition, subtraction, multiplication, and division; solution of first order equations, use of letters and signs; grouping, factoring, exponents, ratios, and proportions; solution of equations, algebraically and graphically; a study of logarithms and use of tables; and introduction to trigonometric functions and their application to right angles; and a study of vectors for use in alternating current. Prerequisite: None.

PHY 1101 SHOP SCIENCE I. Topics covered in this course are systems of measurement, properties of matter, work, machines, and mechanics.

PHY 1102 SHOP SCIENCE II. A basic treatment of electricity including the electron theory, methods of producing electricity, voltage, amperage, resistance, horsepower, wattage, transformers and electric motors. Prerequisite: PHY 1101.

PLU 1110 PLUMBING PIPEWORK. This course will introduce students to the tools, fittings, and small equipment used by plumbers. Most of the time will be spent in the shop, where the student can learn how to handle these materials correctly. The student will perform operations such as threading, cutting, caulking, and sweating of the various kinds of pipe and tubing used in the trade. Prerequisite: None.

PLU 1122 STEAM SYSTEMS (Low-High Pressure). The purpose of this course is to acquaint the students with various types of low and high pressure steam systems and the principles of boiler operations, connectors, fittings, and insulation. They will study the equipment used in heat transmission, such as coils, connectors, and radiators. The layout and component parts of low pressure and industrial steam systems will also be studied.

PLU 1123 HOT WATER AND PANEL HEATING. The piping and accessory equipment needed to transfer hot water to radiators, heaters, and coils, and the advantages and disadvantages of each of these units will be studied, including apparatus for radiant heating and panel heating. Methods of "sizing" equipment for various installations will be included. Practical application will be provided in installing this equipment. Prerequisite: PLU 1122.

PME 1101 AUTOMOTIVE ENGINES. Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in automotive repair work. Study of the construction and operation of components of automotive engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems, proper lubrication; and methods of testing, diagnosing and repairing. Prerequisite: None.

PME 1102 ELECTRICAL & FUEL SYSTEMS. A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system. Prerequisite: PME 1101.

WLD 1101 BASIC GAS WELDING. Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding; bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work. Prerequisite: None.

WLD 1104 BASIC WELDING AND CUTTING. Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding and flame cutting. Emphasis on electric arc and gas welding methods applicable to mechanical repair work. Bronze welding and silver soldering may also be covered.

WLD 1105 AUTO BODY WELDING. Welding practices on material applicable to the installation of body panels and repairs to doors, fenders, hoods, and deck lids. Student runs beads, does butt and fillet welding. Performs tests to detect strength and weaknesses of welded joints. Safety procedures are emphasized throughout the course. Prerequisite: WLD 1101.

WLD 1112 MECHANICAL TESTING AND INSPECTION. The standard methods of mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which will give adequate information as to the quality of the weld. Types of tests to be covered are: bend, destructive, free-bend, guided-bend, nick-tear, notched-bend, tee-bend, nondestructive, V-notch, Charpy impact, etc. Prerequisite: WLD 1120.

WLD 1122 COMMERCIAL AND INDUSTRIAL PRACTICE. Designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper the size and shape description, listing the procedure steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding and nondestructive tests and inspection. Prerequisites: WLD 1141, WLD 1142.

WLD 1123 INERT GAS WELDING. Introduction and practical operations in the use of inert-gas-shield arc welding. A study will be made of the equipment, operation, safety and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding. Prerequisites: WLD 1141, WLD 1142.

WLD 1124 PIPE WELDING. Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code. Prerequisite: WLD 1142.

WLD 1124 CERTIFICATION PRACTICES. This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds. Prerequisites: WLD 1141, WLD 1142, WLD 1123, WLD 1124.

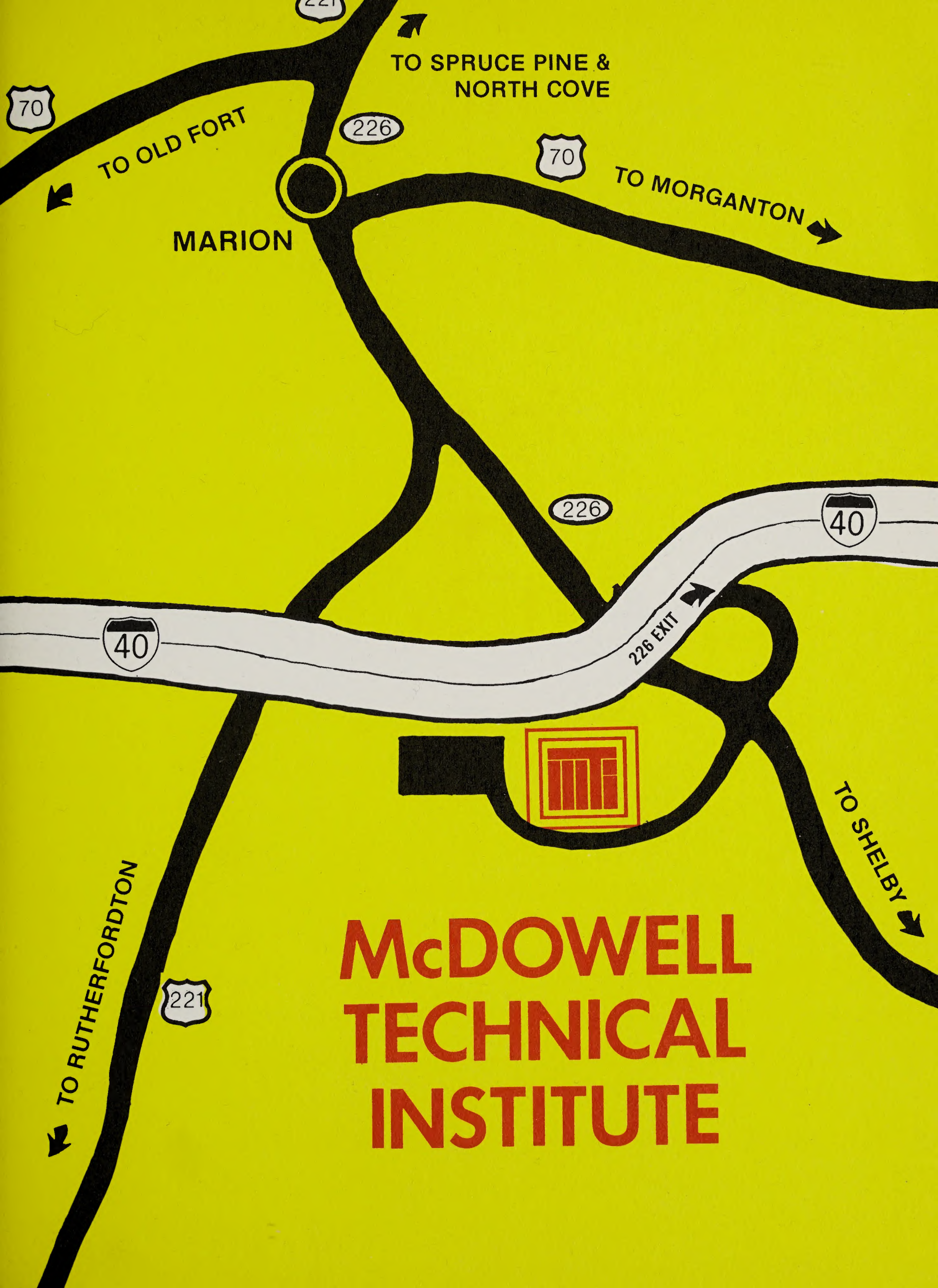
WLD 1141 BEGINNING WELDING. Introduction to the history of oxyacetylene and arc welding, the principles of welding and cutting, nomenclature of the equipment, assembly of unit. The operation of various AC transformers, AC and DC rectifiers, and DC motor generator arc welding units. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead positions, and the cutting of straight lines with the torch. Safety procedures are stressed throughout the program of instruction. Prerequisite: None.

WLD 1142 INTERMEDIATE WELDING. A review of basic oxyacetylene cutting and welding, preparation of metals, types of joints, welding procedures and testing of the welds. The operation of A. C. transformers and D. C. motor generator arc welding machines. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weakness in welding. Safety procedures are emphasized throughout the course. Prerequisite: None.

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